Reservoir Storage Outlook

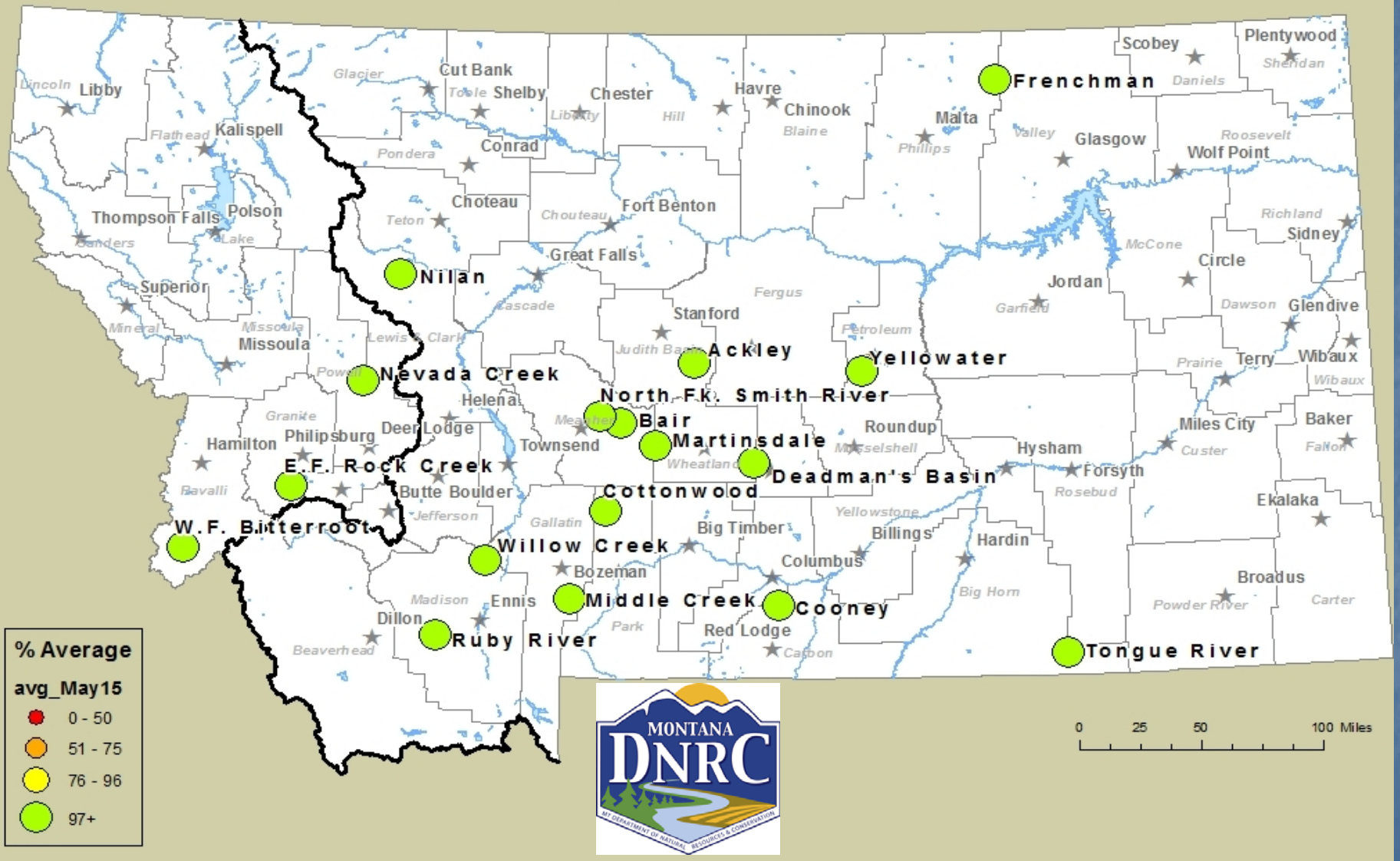
June 18, 2015

DNRC Water Resources Division

State Water Projects Bureau

Montana DNRC State Water Projects Bureau Reservoirs

Reservoir Contents Report
May 21, 2015



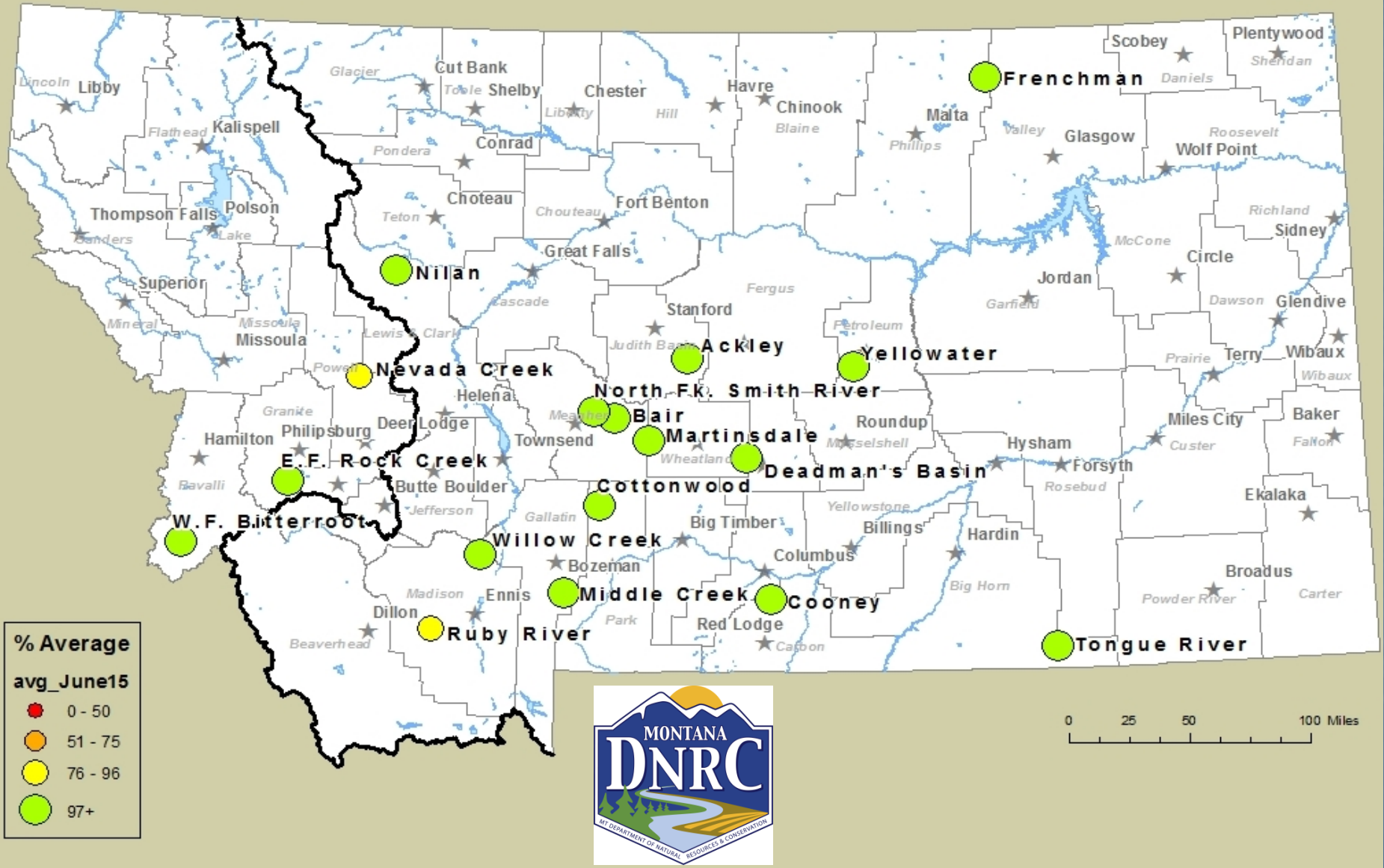
% Average

avg_May15

- 0 - 50
- 51 - 75
- 76 - 96
- 97+

MONTANA DNRC

Reservoir Contents Report
June 18, 2015



MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

WATER RESOURCES DIVISION - STATE WATER PROJECTS BUREAU

May 31, 2015

All Contents in Acre-Feet

RESERVOIR	TOTAL CAPACITY (includes dead storage)*	CONTENTS						READING DATE	COMMENTS
	Full Pool	AVERAGE	Last Year	Last Month	PRESENT	% CAPACITY	%AVERAGE		
	Contents	1960 - 2014	5/31/2014	4/30/2015	5/31/2015	5/31/2015	5/31/2015		
ACKLEY	6,722	4,724	4,552	4,873	6,572	98	139	5/29/2015	elev.= 4317.4
BAIR	7,300	5,747	7,261	6,370	7,537	103	131	5/28/2015	elev.=5325.84
COONEY	28,230	24,023	22,584	23,580	28,499	101	119	6/2/2015	elev.=4251.3 (28,409 AF)
COTTONWOOD	1,900	1,580	1,987	1,900	1,940	102	123	6/2/2015	elev.= 5102.64
DEADMAN'S BASIN	75,968	54,232	74,686	75,744	75,315	99	139	5/29/2015	elev.=3920.7 (71,565 AF)
E.F. ROCK CREEK	16,040	10,794	12,005	11,868	10,813	67	100	5/29/2015	elev.=6041.01
FRENCHMAN	2,777	2,656	2,777	2,777	2,777	100	105	6/1/2015	spilling
MARTINSDALE	23,348	16,051	20,186	22,924	23,168	99	144	5/29/2015	elev.=4779.1
MIDDLE CREEK	10,184	9,323	7,935	7,501	10,142	100	109	5/29/2015	elev.=6720.8
NEVADA CREEK	11,207	11,022	11,522	11,244	9,924	89	90	5/28/2015	elev.=4612.41
NILAN	10,992	8,531	10,662	10,571	10,980	100	129	6/1/2015	elev.=4442.48
N.FK. SMITH RIVER	11,406	10,339	11,553	10,399	11,553	101	112	5/28/2015	elev.= 5488.77
RUBY RIVER	37,612	37,360	37,612	37,844	37,642	100	101	5/5/2015	elev.=5393.0
TONGUE RIVER	79,071	71,399	83,489	66,537	83,412	105	117	5/29/2015	elev.=3429.5
W.F. BITTERROOT	32,362	32,617	34,305	32,362	33,334	103	102	5/29/2015	elev.=4726.89
WILLOW CREEK	18,000	16,618	16,725	16,843	18,809	104	113	6/3/2015	elev.=4736.77
YELLOWATER	3,842	1,531	3,366	3,187	3,252	85	212	6/1/2015	elev.=3116.95

* Note: Reservoir contents include dead storage at the following:

Ackley	1001 AF	**	Tongue River	711 AF	(O&M storage table includes dead storage)
Cooney	90 AF	**	W. F. Bitterroot	656 AF	(O&M storage table includes dead storage)
Deadman's	3750 AF	**	Willow Creek	269 AF	(O&M storage table includes dead storage)
Nilan	900 AF	**			

** O&M slope storage table does not include dead storage (so dead storage has to be added into the storage from the table)

* Note: Cooney capacity reflects capacity after 1982 dam rehabilitation; prior capacity was 24,195 A.F.. Average storage shown is for post rehabilitation data.

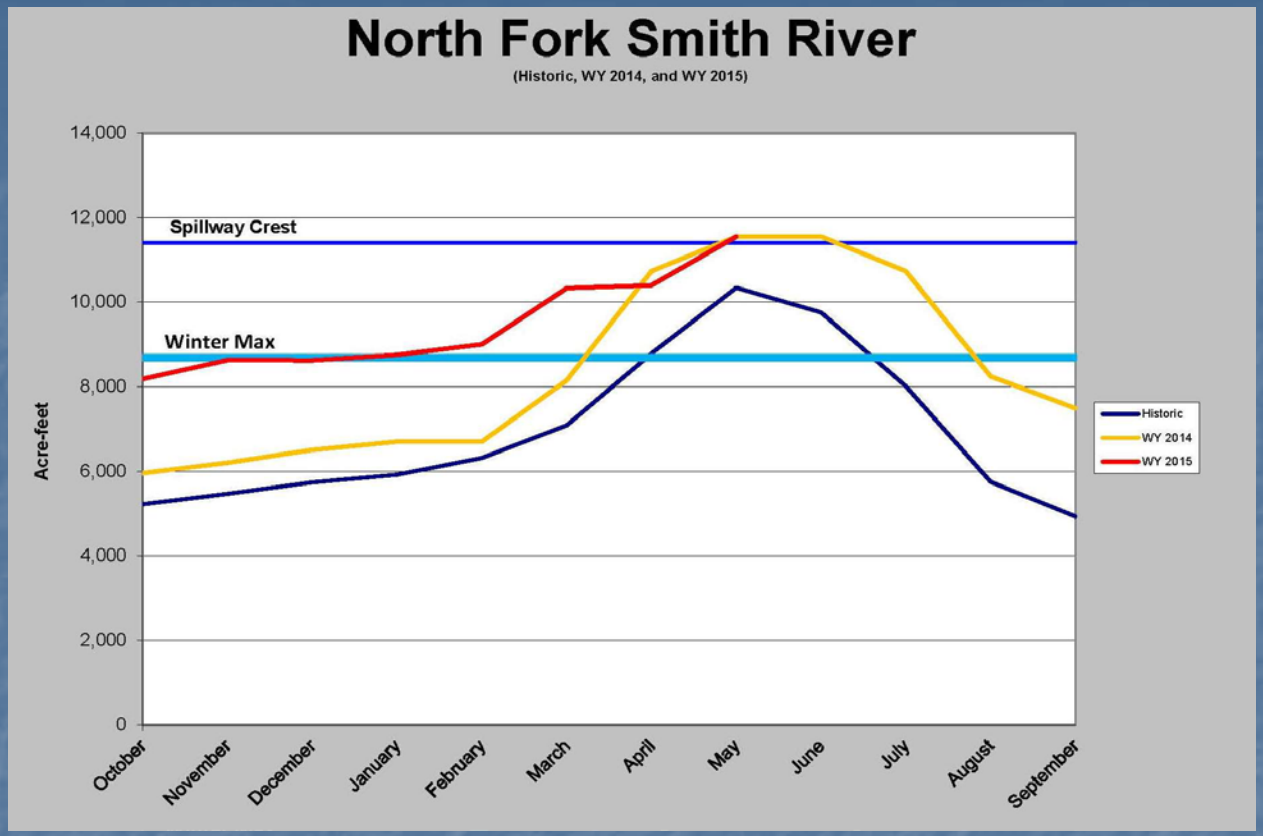
* Note: Middle Creek capacity reflects capacity after 1993 dam rehabilitation; prior capacity was 8,027 A.F.. Average storage shown is for post rehabilitation data.

* Note: Nevada Creek Reservoir Capacity reflects live storage capacity survey conducted in year 2000. Prior live storage capacity documented as 12,723 AF.

* Note: Tongue River capacity reflects capacity after 1999 dam rehabilitation; prior capacity was 68,040 A.F.. Average storage is post rehabilitation data.

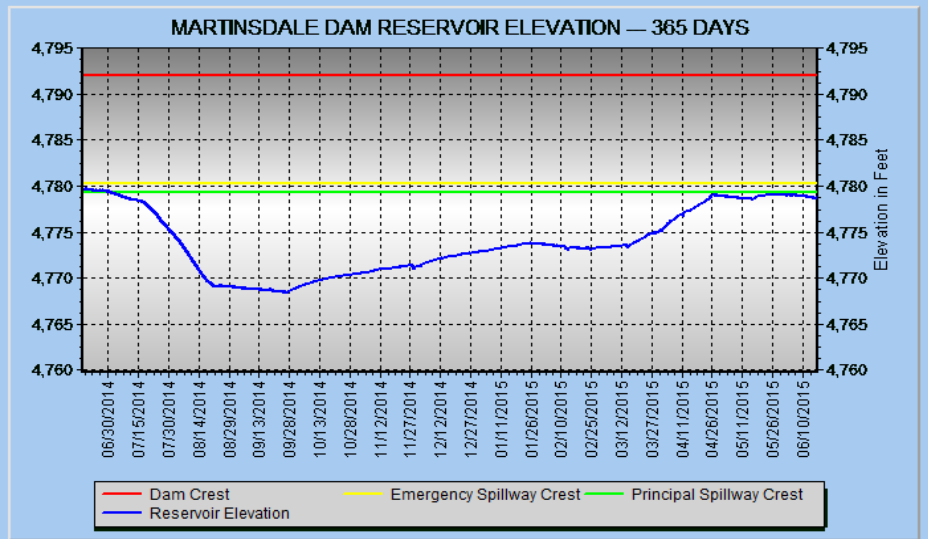
* Note: Frenchman Reservoir capacity tables updated based on aerial survey; prior capacity was 3752 A.F. Average shown is pre aerial survey

Montana DNRC State Water Projects Bureau Reservoirs



- 101% Capacity
- 112% average
- 11,553 Acre-Feet

Montana DNRC State Water Projects Bureau
Reservoirs



TIME OF LAST READING	6/17/2015 7:00:00 AM
RESERVOIR ELEVATION	4,778.8 FT
RESERVOIR VOLUME	22,888 AF

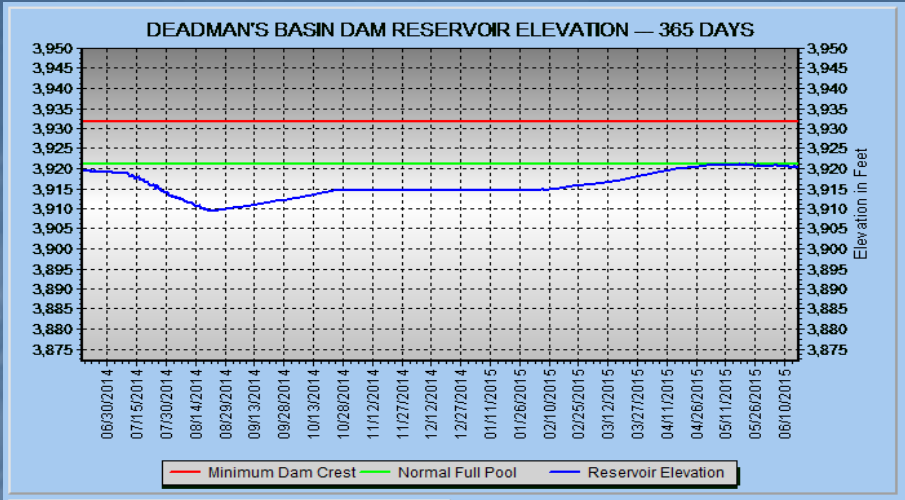
*NOTE: RESERVOIR ELEVATIONS BELOW 4759.78 FT ARE NOT VALID DUE TO INSTRUMENTATION LIMITATIONS.

REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	4792.0	38,958
EMERGENCY SPILLWAY CREST	4780.25	24,350
PRINCIPAL SPILLWAY CREST	4779.25	23,348
TRANSDUCER CASE DEPTH	4759.78	8,444

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 98% Capacity
- 143% average
- 22,888 Acre-Feet
- Inflows=0 cfs
- Outflows=0 cfs

Montana DNRC State Water Projects Bureau Reservoirs



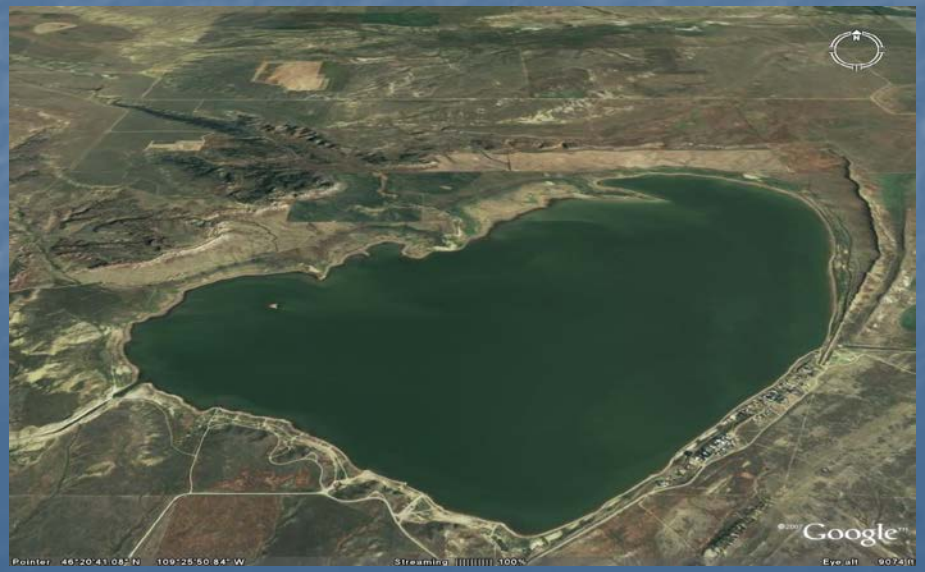
- 98% Capacity
- 138% average
- 74,674 Acre-Feet (Total Storage)
- Elev.=3920.4

TIME OF LAST READING	6/17/2015 12:00:00 AM
RESERVOIR ELEVATION	3,920.4 FT
RESERVOIR VOLUME	70,924 AF
OPERATING GATE	3.2%
ISOLATION GATE	99.7%

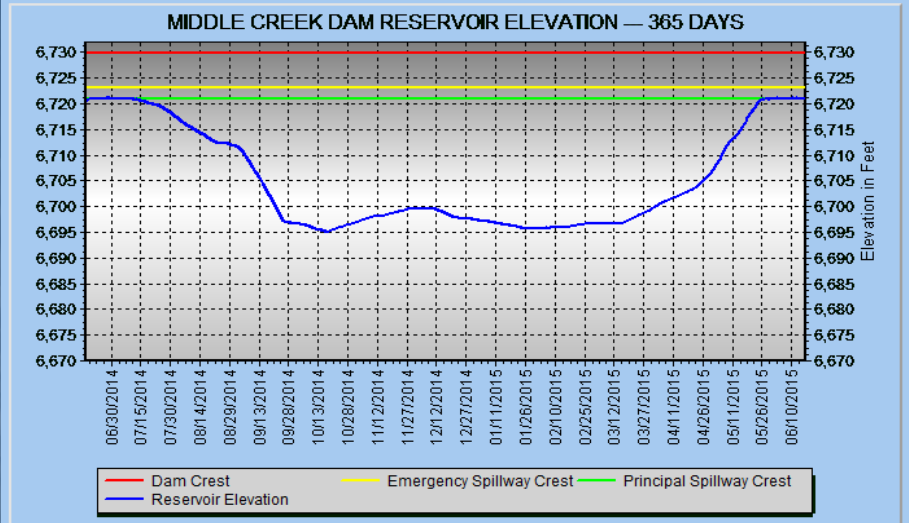
GATEHOUSE TEMPERATURE	72.9 deg. F

REFERENCE INFORMATION	FT (MSL)	AC-FT
MINIMUM DAM CREST	3931.7	100,000
NORMAL FULL POOL	3921.0	72,218
LOWEST USEABLE ELEVATION (DEAD STORAGE)	3872.0	0 (3,750)

*** PROVISIONAL DATA SUBJECT TO REVISION ***



Montana DNRC State Water Projects Bureau Reservoirs

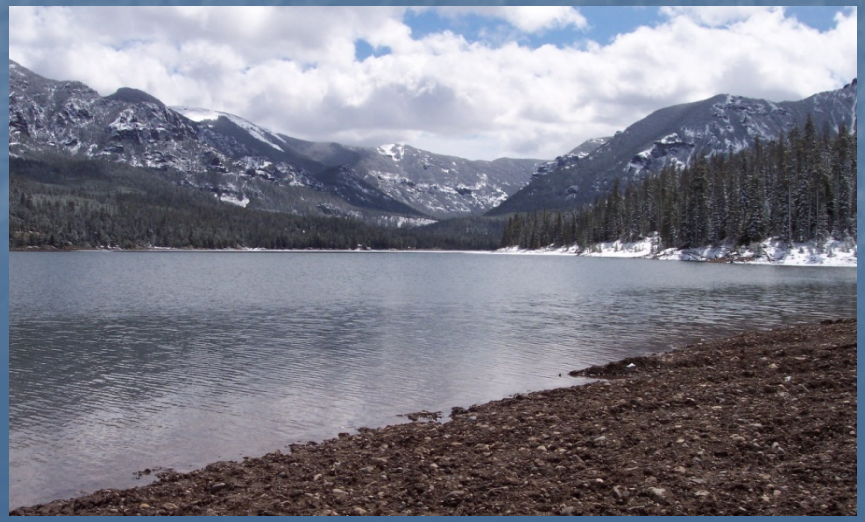


TIME OF LAST READING	6/17/2015 3:00:00 AM
RESERVOIR ELEVATION	6,721.0 FT
RESERVOIR VOLUME	10,178 AF
MIDDLE CREEK BELOW DAM	120.8 CFS
TIME OF LAST READING	6/17/2015 7:45:00 AM

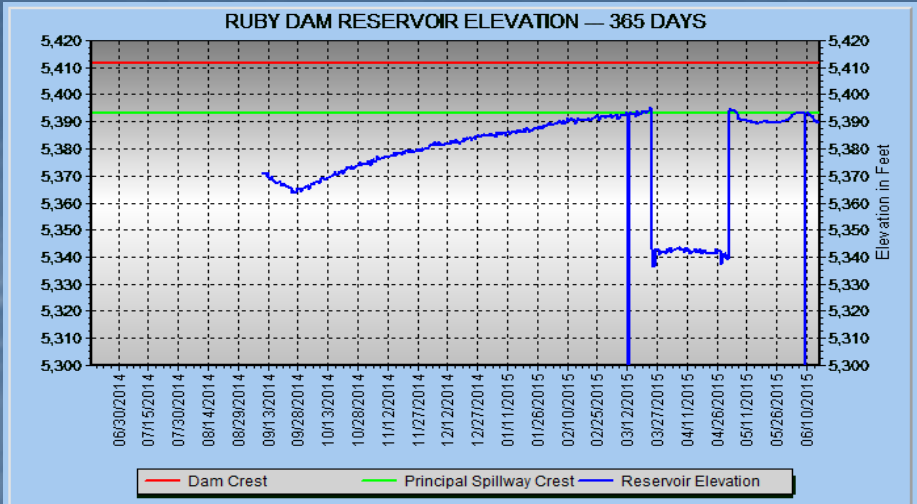
REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	6730.0	12,790
EMERGENCY SPILLWAY CREST	6723.0	10,707
PRINCIPAL SPILLWAY CREST	6721.0	10,184
LOWEST USABLE ELEVATION	6637.0	0

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 100% Capacity
- 109% Average
- Outflows~121 cfs
- 10,178 Acre-Feet
- Elev.=6721.0



Montana DNRC State Water Projects Bureau Reservoirs

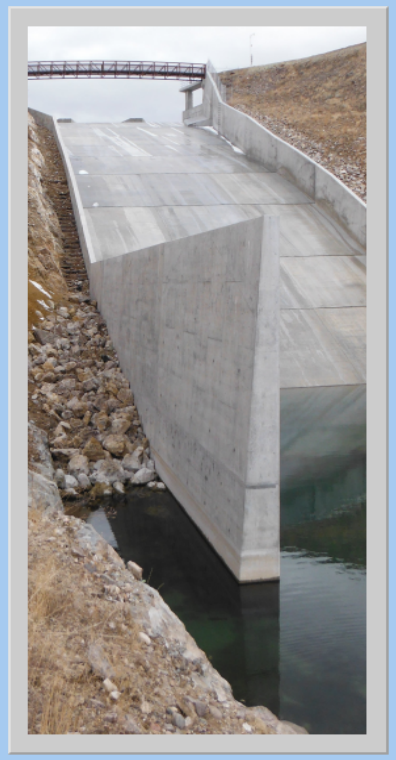


TIME OF LAST READING	6/16/2015 12:00:00 PM
RESERVOIR ELEVATION	5,390.0 FT
RESERVOIR VOLUME	34,682 AF
60 INCH VALVE GATE	37.2%
18 INCH VALVE GATE	-5.0%

SPILLWAY SLIDE GATE	0.6%
VALVE GATE OUTFLOW (ESTIMATED)	350.4 CFS

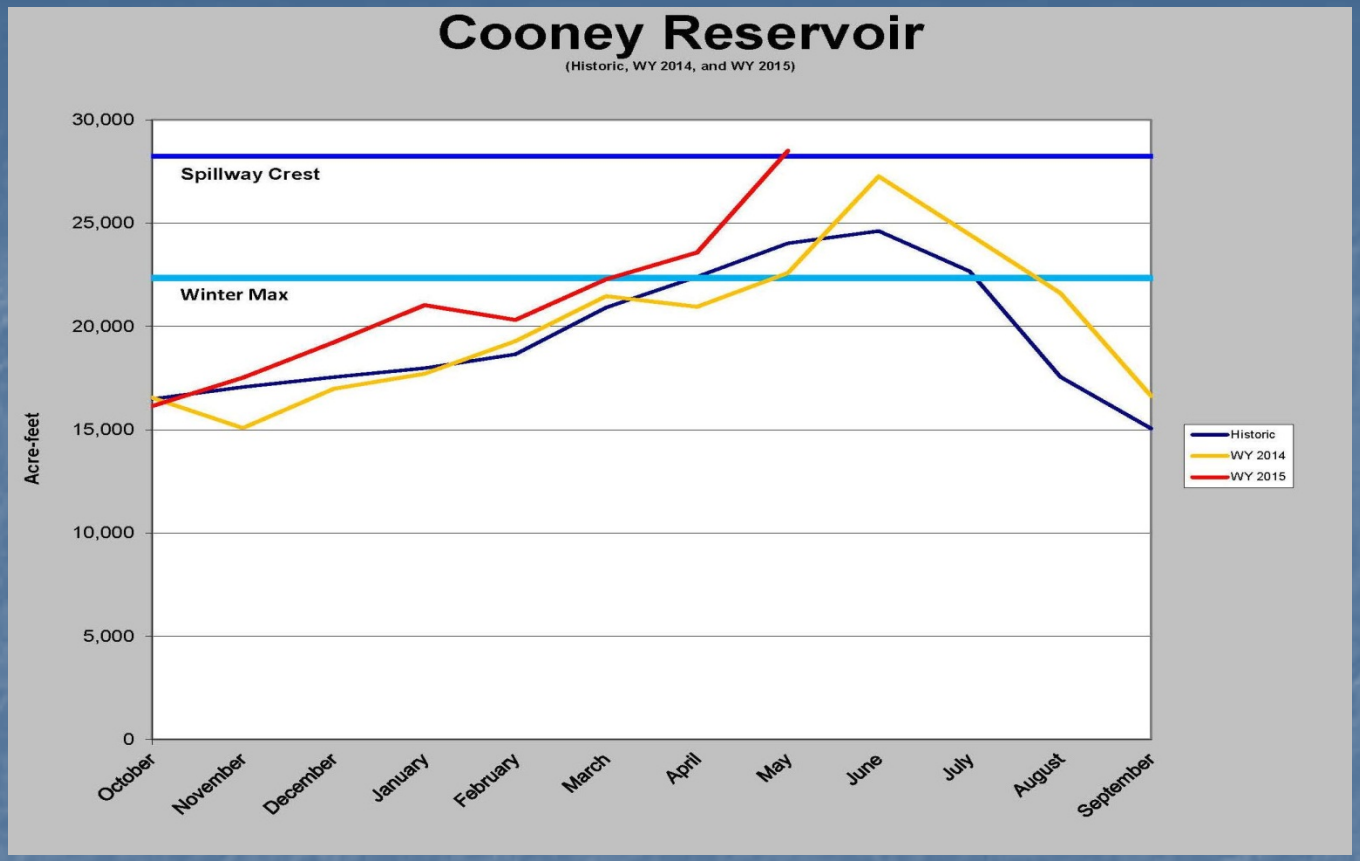
REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	5411.5	59,484
PRINCIPAL SPILLWAY CREST	5393.0	37,642

*Data for Ruby Dam is preliminary. Presented data may not accurately represent the actual conditions.



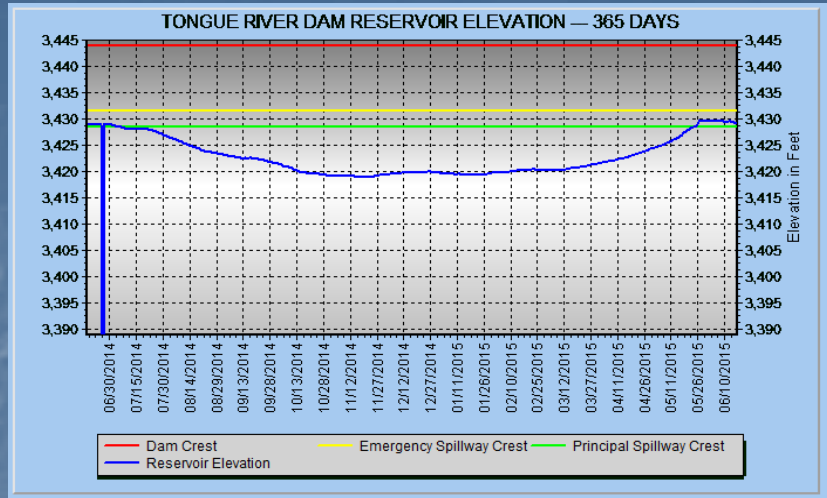
- 92% Capacity
- 93% average
- 34,682 Acre-Feet
- Elev.=5390.0
- Inflows=211 cfs
- Outflows=377 cfs

Montana DNRC State Water Projects Bureau Reservoirs



- 101% Capacity
- 119% average
- 28,499 Acre-Feet
- Elev.=4251.3
- Inflows= 325 cfs
- Outflows=325 cfs

Montana DNRC State Water Projects Bureau Reservoirs



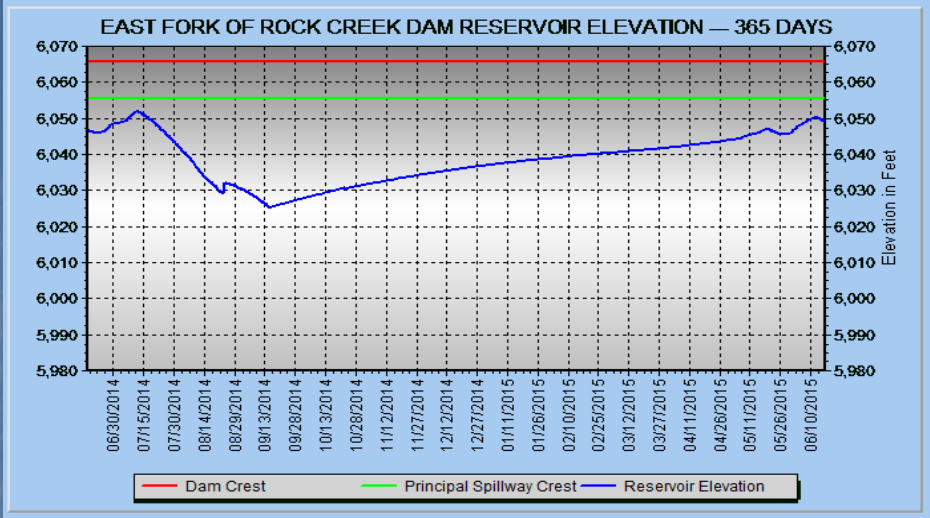
TIME OF LAST READING	6/17/2015 5:00:00 AM
RESERVOIR ELEVATION	3,429.2 FT
RESERVOIR VOLUME	82,343 AF
PRIMARY GATE	31.0%
SECONDARY GATE	1.0%

REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	3444.0	150,000
EMERGENCY SPILLWAY CREST	3431.5	91,107
PRINCIPAL SPILLWAY CREST	3428.4	79,071
TOP OF LOW LEVEL INTAKE	3390.0	6,656

*** PROVISIONAL DATA SUBJECT TO REVISION ***

- 104% Capacity
- 115% Average
- 82,343 Acre-Feet
- Elev.=3429.2
- Inflows=2,310 cfs
- Outflows=2,180 cfs

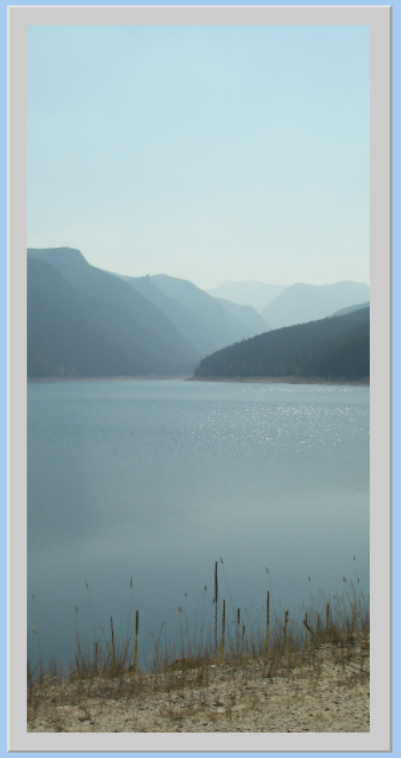
Montana DNRC State Water Projects Bureau Reservoirs



TIME OF LAST READING	6/17/2015 5:00:00 AM
RESERVOIR ELEVATION	6,049.0 FT
RESERVOIR VOLUME	13,557 AF

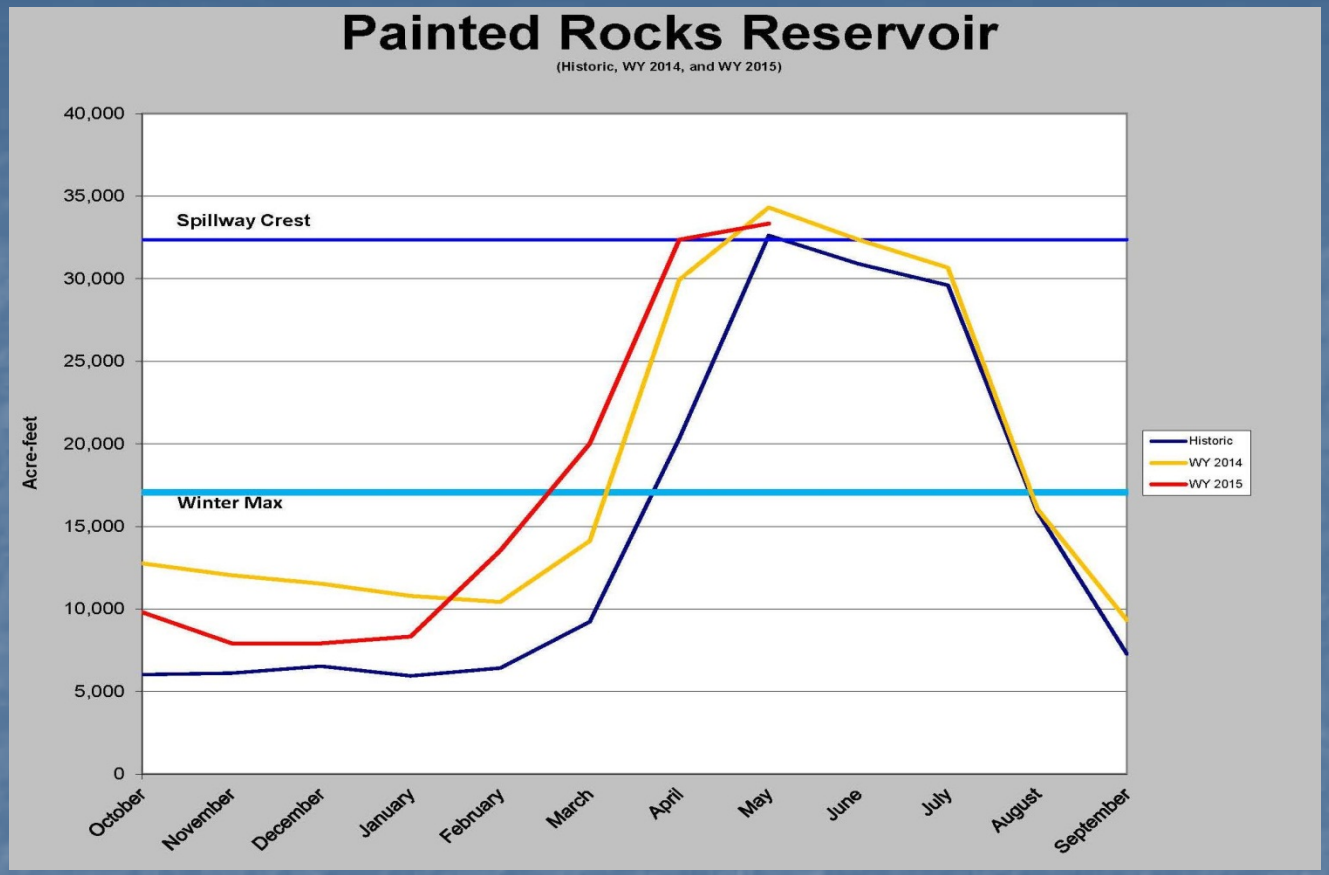
REFERENCE INFORMATION	FT (MSL)	AC-FT
DAM CREST	6065.6	19,850
PRINCIPAL SPILLWAY CREST	6055.5	16,040
LOWEST USABLE ELEVATION	5989.7	0

*** PROVISIONAL DATA SUBJECT TO REVISION ***



- 85% Capacity
- 126% average
- 13,577 Acre-Feet
- Elev.=6049.0

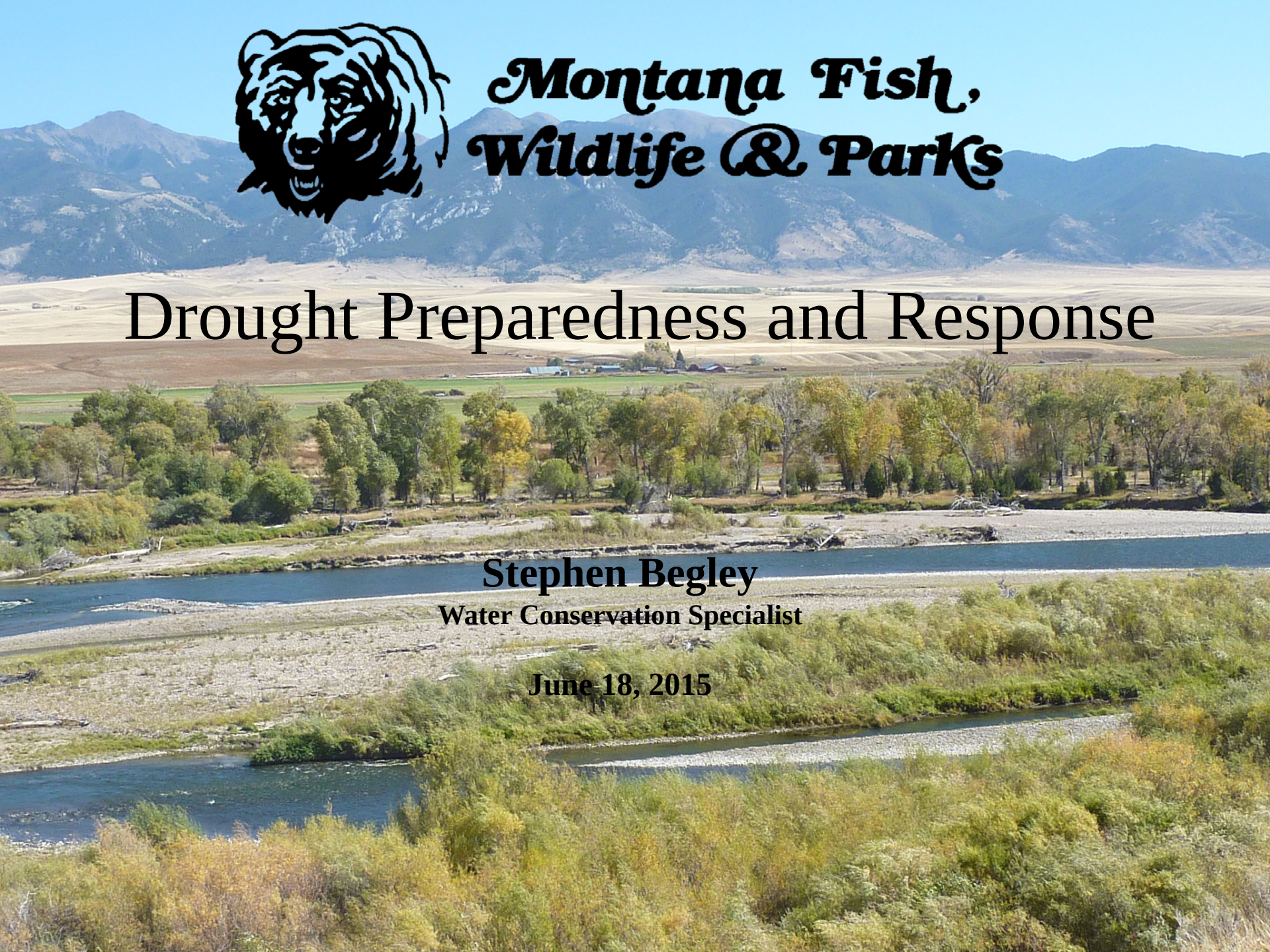
Montana DNRC State Water Projects Bureau Reservoirs



- 103% Capacity
- 102 % average
- 33,334 Acre-Feet
- Elev.=4726.89
- Inflows~317 cfs
- Outflows=317 cfs

Summary

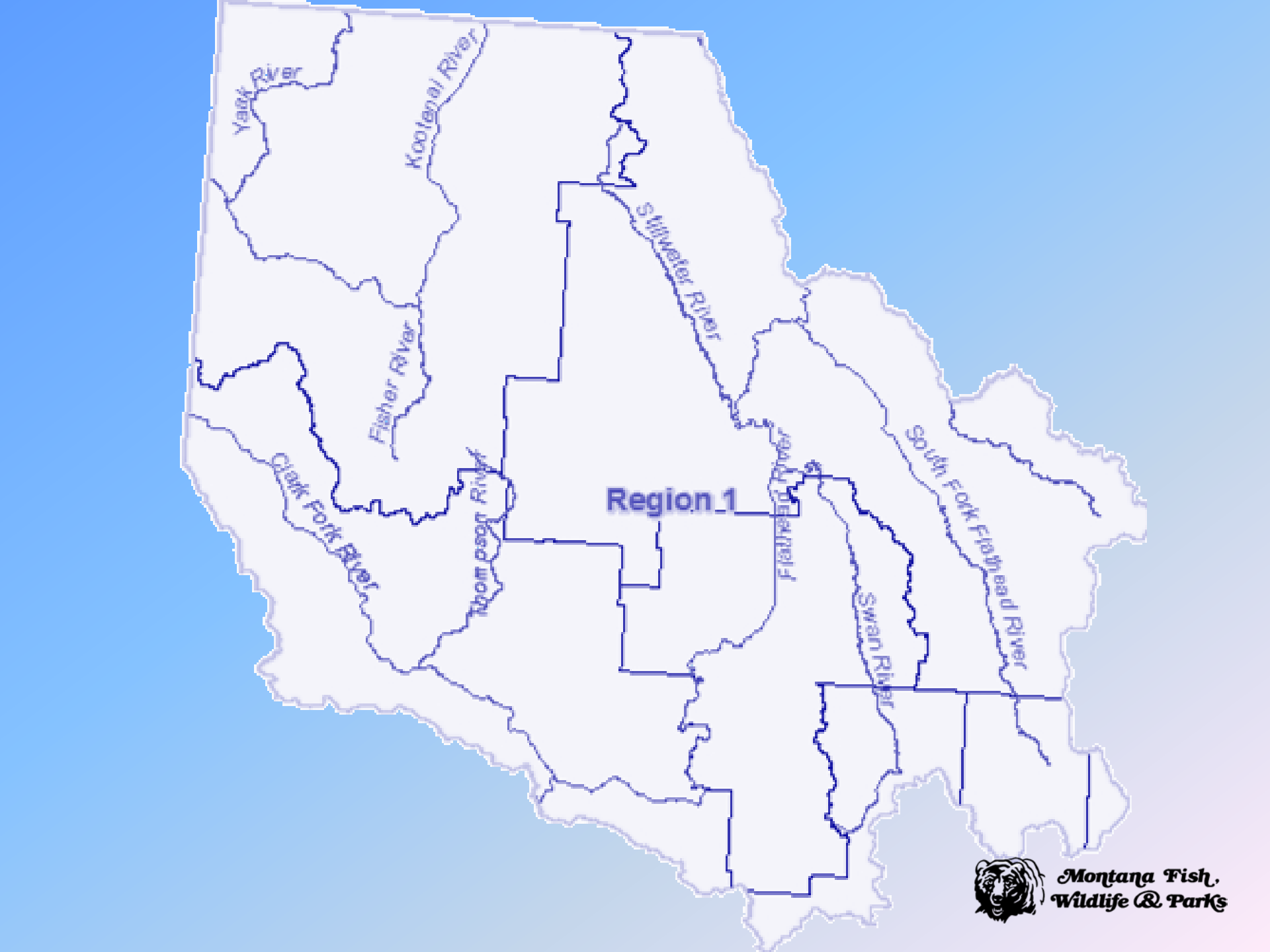
- Maximum Winter Carryover was maintained across majority of State Water Projects.
- Reservoirs filled early in spring ahead of normal timing due in part to winter carryover and early snowpack runoff.
- Majority of State Water Projects Reservoirs have average to above average storage for June, Ruby River Reservoir and Nevada Creek Reservoir are below the historical average storage for June.
- Inflows are steadily declining.
- Reservoir releases increasing as decreed water rights come out of priority.

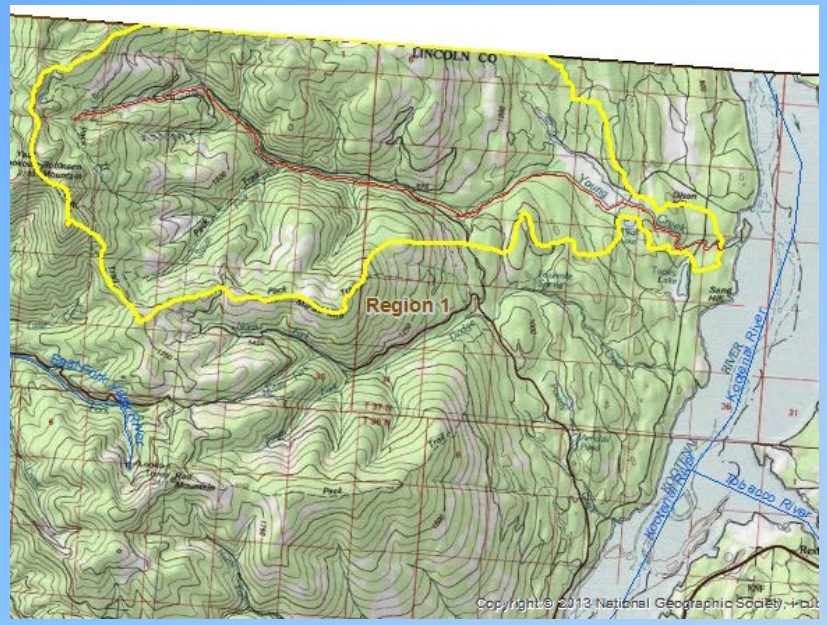


Drought Preparedness and Response

Stephen Begley
Water Conservation Specialist

June 18, 2015


Yaak River
Kootenai River
Stillwater River
Fisher River
Clark Fork River
Thompson River
Region 1
Flathead River
Swan River
South Fork Flathead River
Montana Fish, Wildlife & Parks



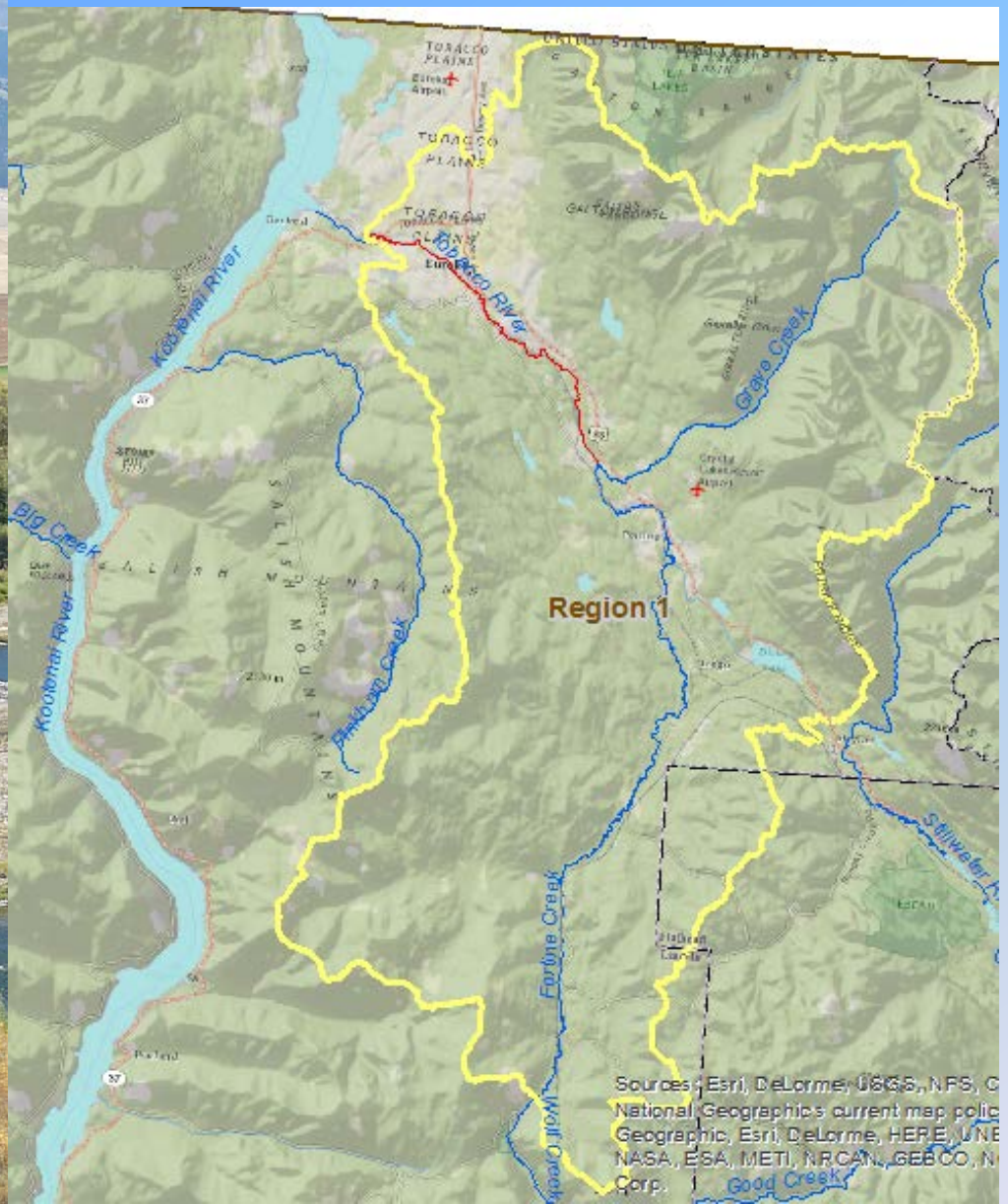
Young Creek

- 5/1-6/30
  25cfs
- 7/01-12/31
  5cfs

On June 11, FWP measured flows at 14.14 cfs

- Notification letters were sent to junior water users.
- Emphasis on encouraging community drought planning.

Montana Fish, Wildlife & Parks



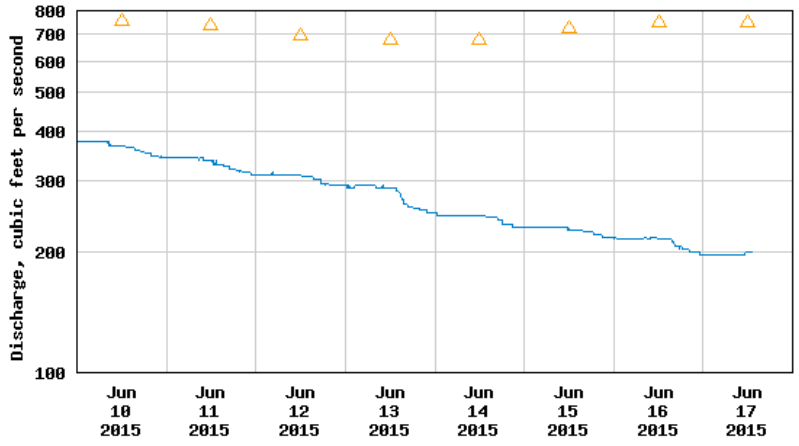
Tobacco River

- 6/16-6/30
  433 cfs
- 7/01-7/15
  282 cfs
- 7/16-12/31
  100 cfs

Montana Fish, Wildlife & Parks

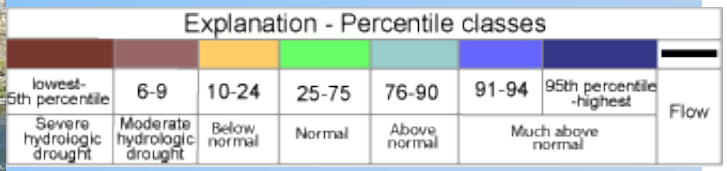
USGS

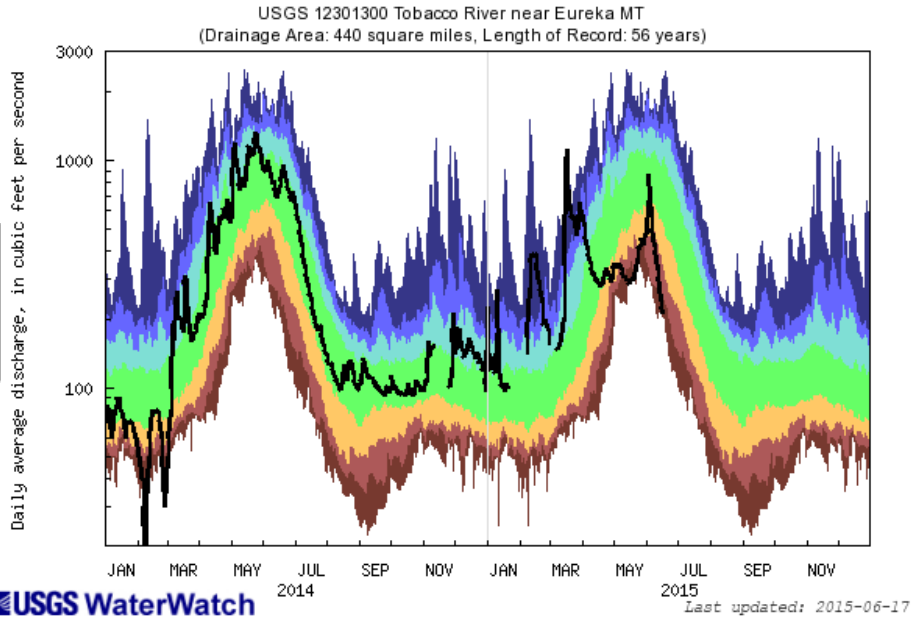
USGS 12301300 Tobacco River near Eureka MT



Daily discharge, cubic feet per second -- statistics for Jun 17 based on 56 years of record more

Most Recent Instantaneous Value Jun 17	Min (1992)	25th percen-tile	Median	Mean	75th percen-tile	Max (1974)
197	201	497	748	784	1030	2270





Montana Fish, Wildlife & Parks

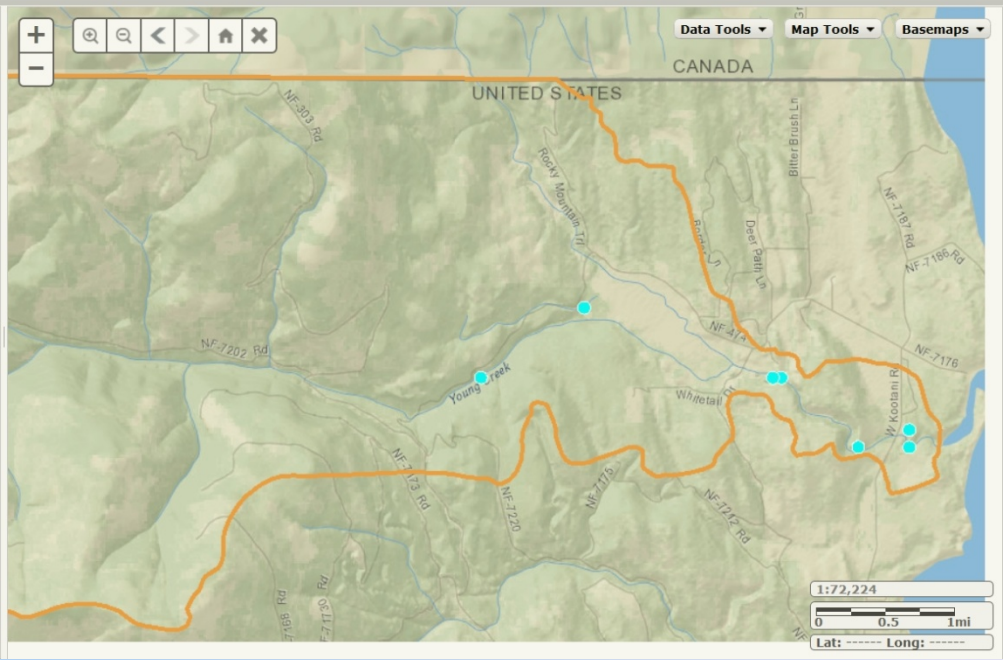
In-stream Water Rights Review

Layers | Legend | Water Rights Review

Step 3: Update the "Include in Export" checkbox to include/exclude specific juniors from the export. All juniors are included by default. To obtain a list of addresses and abstracts, send the exported spreadsheet to David Coey at DNRC.

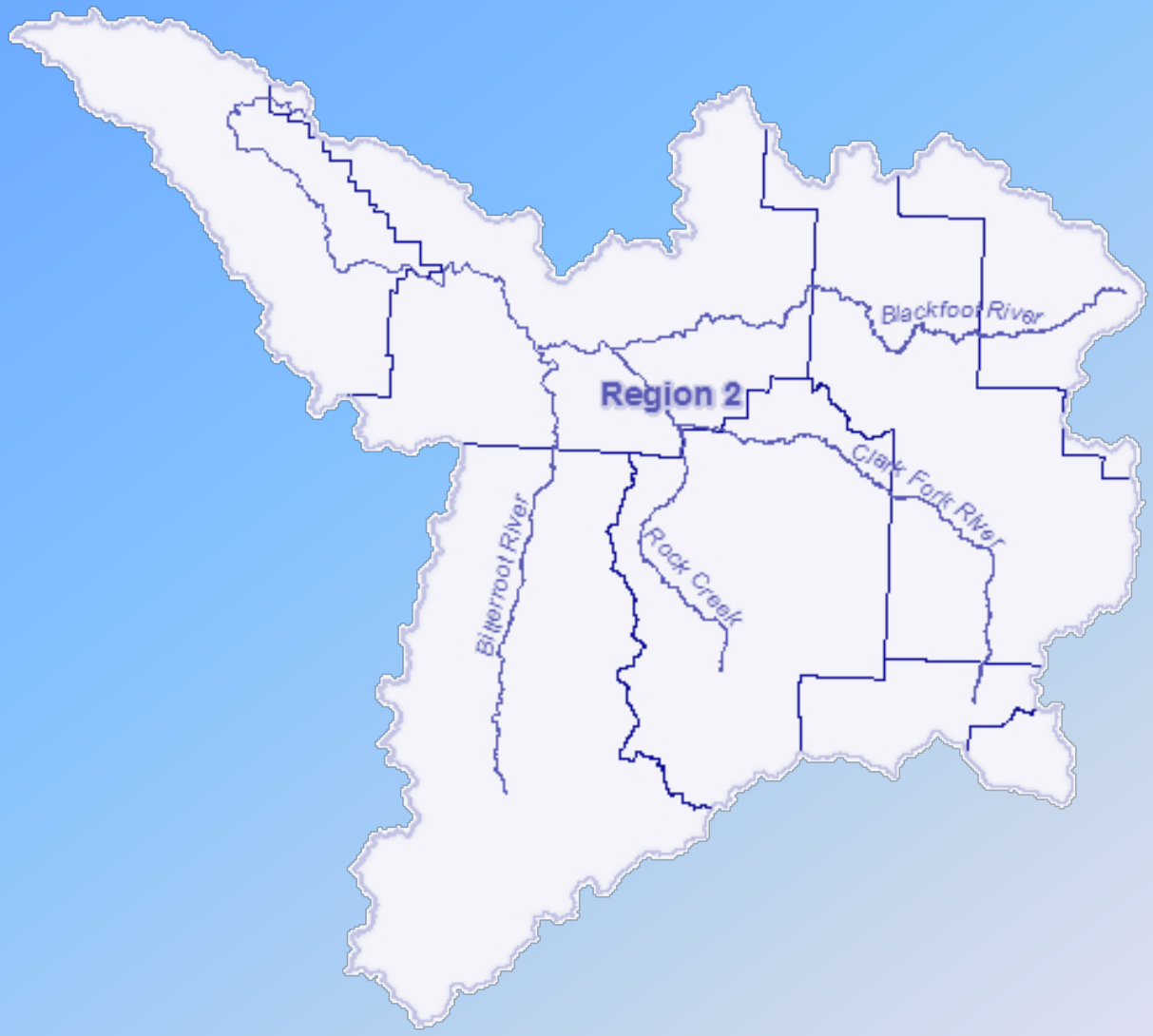
Include in Export	Abstract	WR Key	WR Number	Priority Date	Max Acres	Max Flow Rate	Flow Rate Unit	Purposes
☑	View Page	290663-1	76D 215021 00	06/30/1973	0	5	CFS	IRRIGATION
☑	View Page	23164-1	76D 8532 00	06/03/1976	100	612.5	GPM	IRRIGATION
☑	View Page	345714-1	76D 30010029	01/11/1978	1	4.68	GPM	LAWN AND GARD
☑	View Page	35957-1	76D 15266 00	09/20/1977	4	45	GPM	IRRIGATION
☑	View Page	345710-1	76D 30010025	01/11/1978	4	25.8	GPM	IRRIGATION
☑	View Page	345731-1	76D 30010048	06/19/1986	13.6999	85.8	GPM	IRRIGATION
☑	View Page	289639-1	76D 213700 00	06/30/1973	35	1	CFS	IRRIGATION
☑	View Page	345727-1	76D 30010044	01/11/1978	18.2000	113.75	GPM	IRRIGATION
☑	View Page	289461-1	76D 213385 00	06/30/1973	11	66	GPM	IRRIGATION
☑	View Page	316957-1	76D 211909 00	06/30/1973	3	100	GPM	IRRIGATION
☑	View Page	345726-1	76D 30010043	06/19/1986	4	25.05	GPM	IRRIGATION
☑	View Page	125924-1	76D 67796 00	03/15/1988	25	200	GPM	IRRIGATION

Export | Cancel



There's an app for that!

Montana Fish, Wildlife & Parks



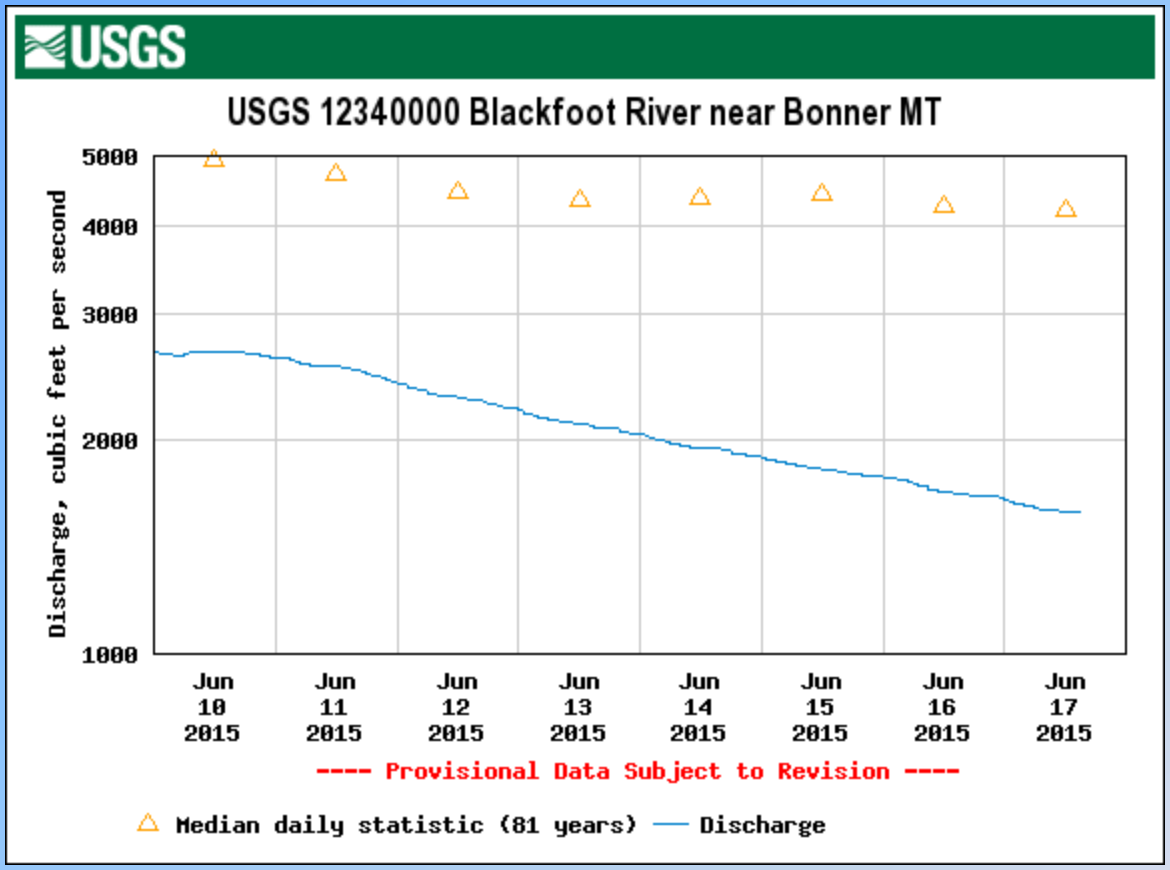
Montana Fish, Wildlife & Parks

Blackfoot River

- 5/1-6/30
  2,000 cfs
- 7/1-7/15
  1,523 cfs
- 7/16-8/31
  700 cfs

Administered by community drought plan in cooperation with the Blackfoot Challenge.

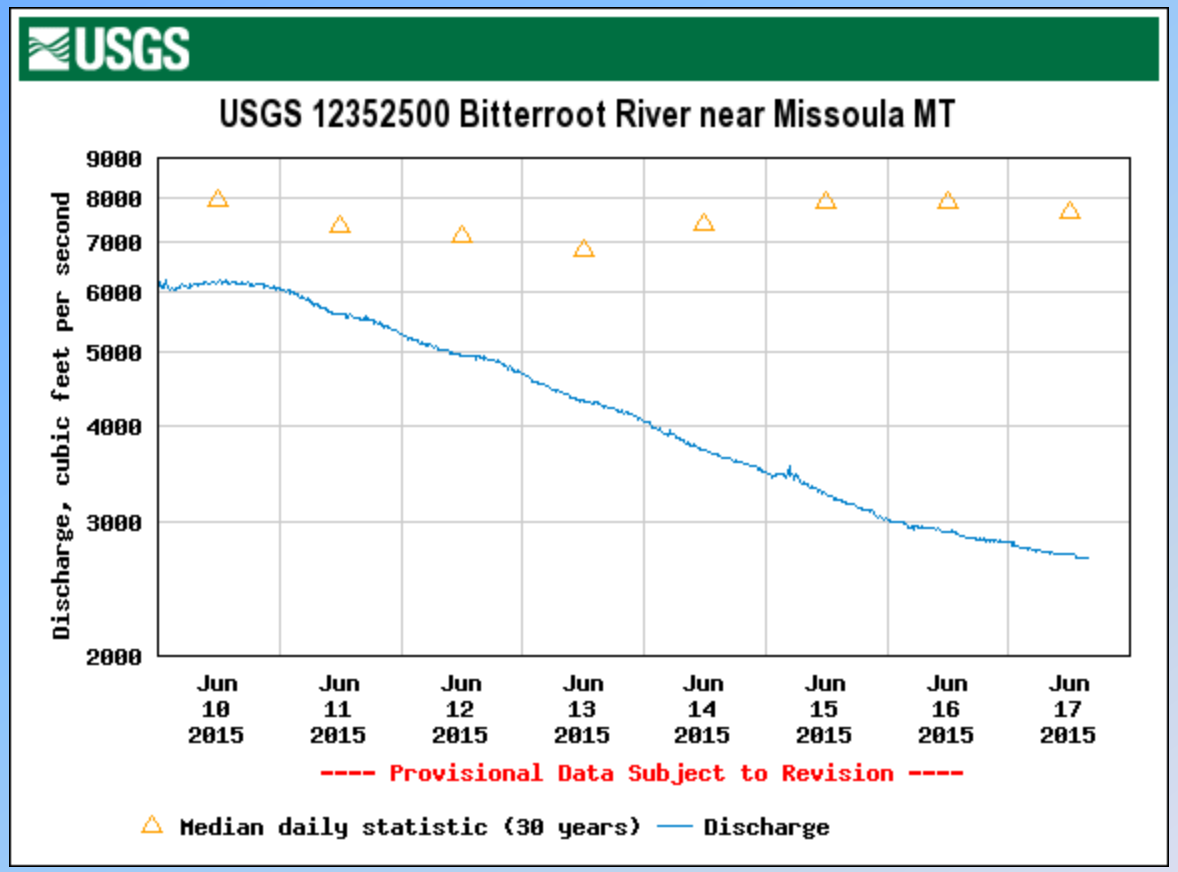
USGS



Daily discharge, cubic feet per second -- statistics for Jun 17 based on 81 years of record more

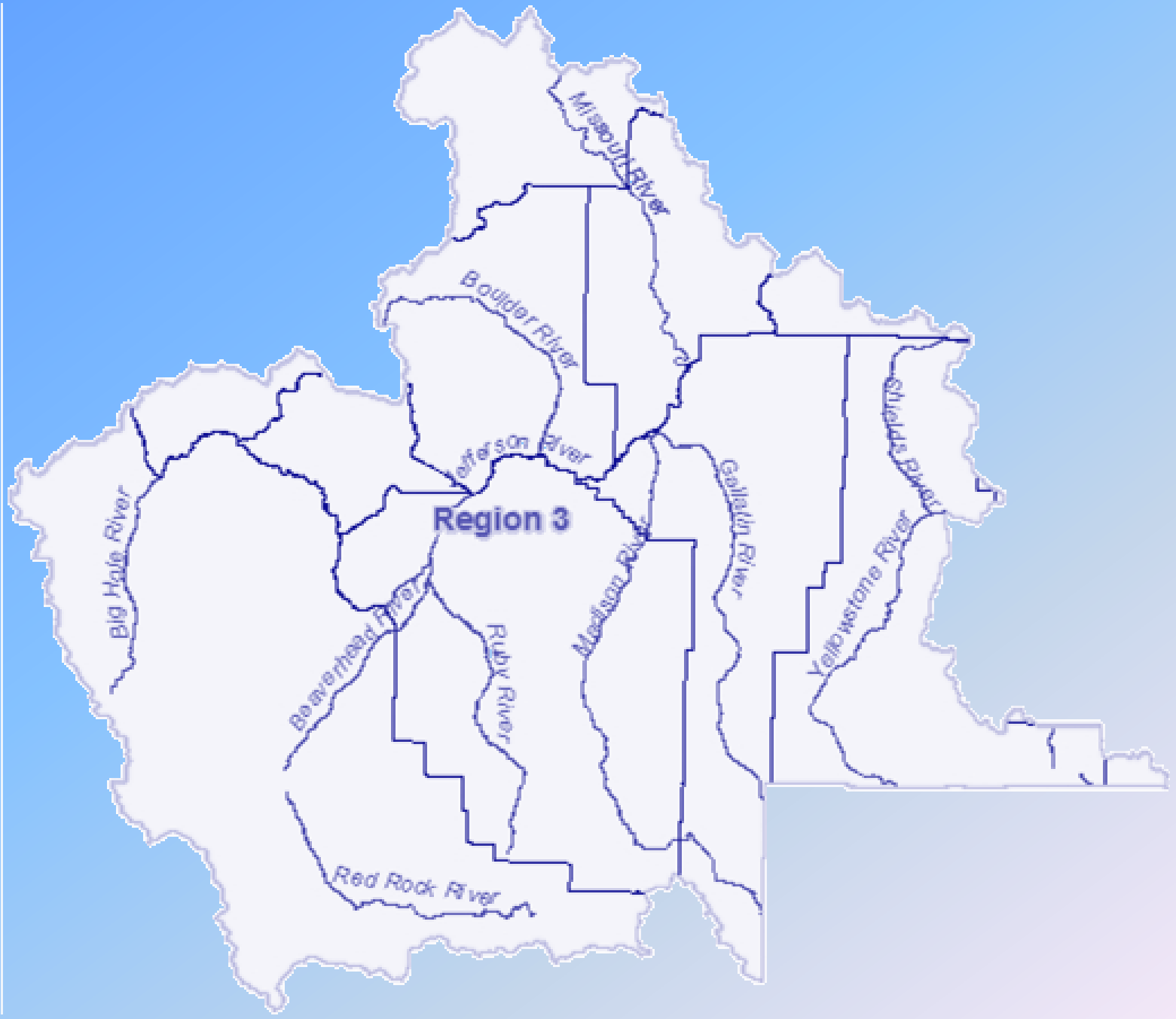
Min (1987)	Most Recent Instantaneous Value Jun 17	25th percen-tile	Median	Mean	75th percen-tile	Max (1899)
991	1580	2880	4210	4910	6330	13600

USGS



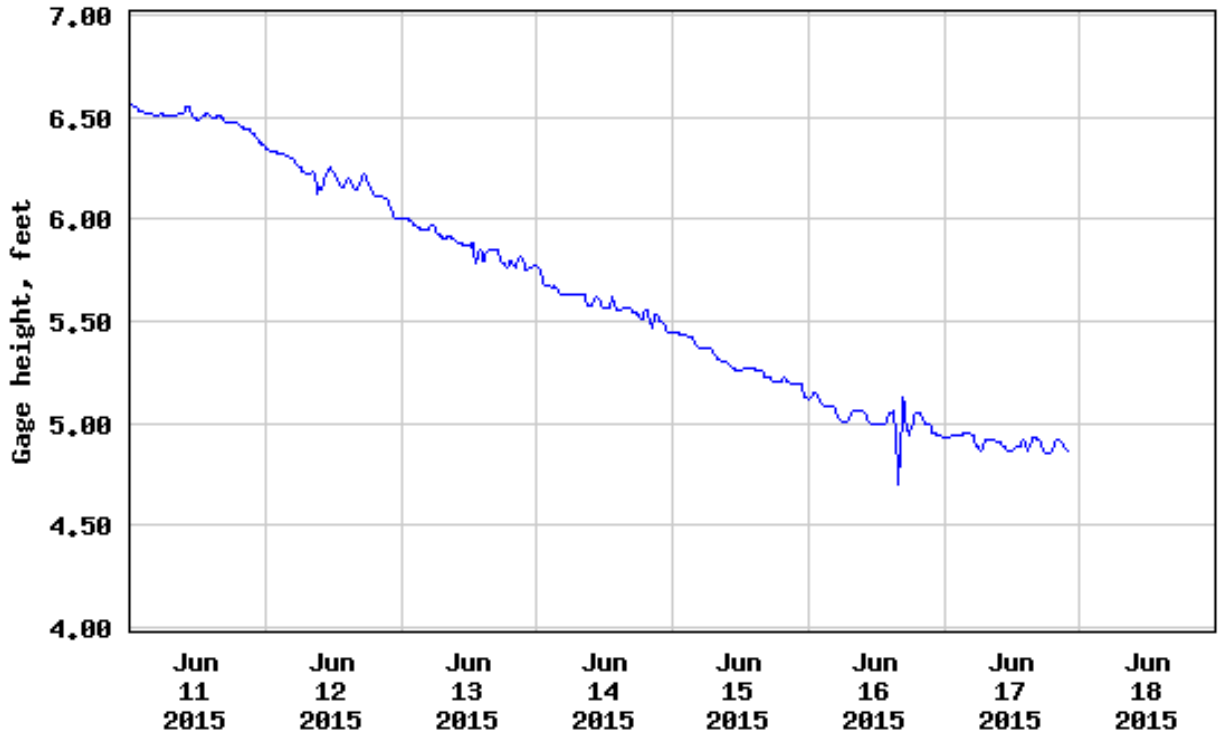
Daily discharge, cubic feet per second -- statistics for Jun 17 based on 30 years of record more

Most Recent Instantaneous Value Jun 17	Min (1992)	25th percen-tile	Median	Mean	75th percen-tile	Max (1899)
2680	2780	4580	7650	8320	10200	20500


Missouri River
Boulder River
Jefferson River
Big Hole River
Region 3
Beaverhead River
Ruby River
Madison River
Gallatin River
Shields River
Yellowstone River
Red Rock River

USGS

USGS 06054500 Missouri River at Toston MT



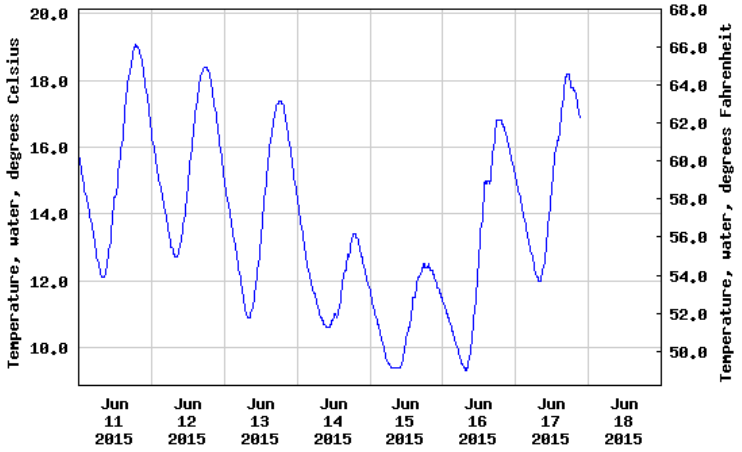
Daily discharge, cubic feet per second -- statistics for Jun 18 based on 81 years of record more

Most Recent Instantaneous Value Jun 18	Min (1987)	25th percen-tile	Median	Mean	75th percen-tile	Max (1974)
-- unavailable --	2420	7590	11800	12700	17600	26900


Cut Bank Creek
Two Medicine River
Marias River
Willow Creek
Teton River
Region 4
Sun River
Missouri River
Belt Creek
Arrow Creek
Judith River
Box Elder Creek
Smith River

USGS

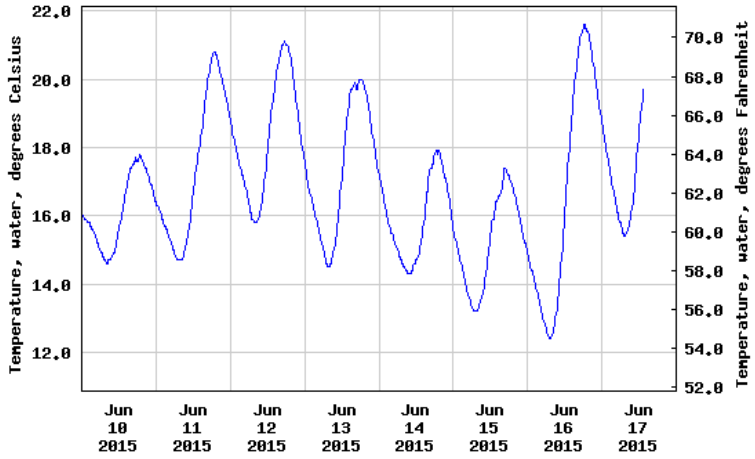
USGS 06073500 Dearborn River near Craig MT



---- Provisional Data Subject to Revision ----

USGS

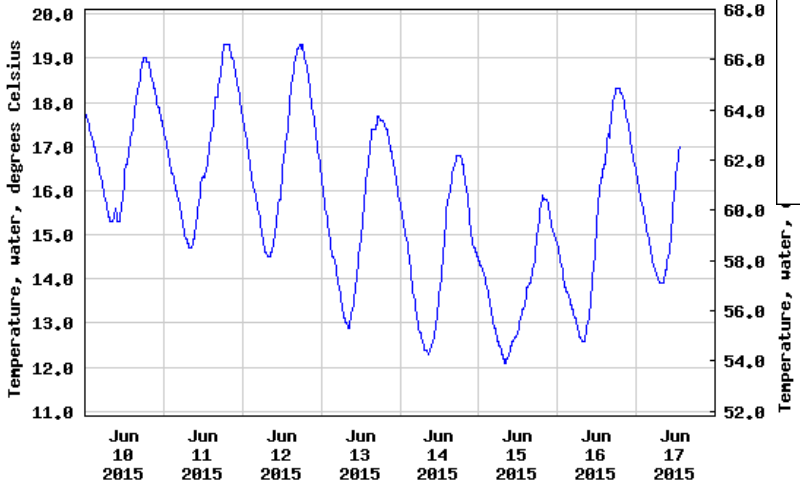
USGS 06085800 Sun River at Simms MT



---- Provisional Data Subject to Revision ----

USGS

USGS 06077200 Smith River bl Eagle Cr nr Fort Logan MT



---- Provisional Data Subject to Revision ----

Montana Fish, Wildlife & Parks

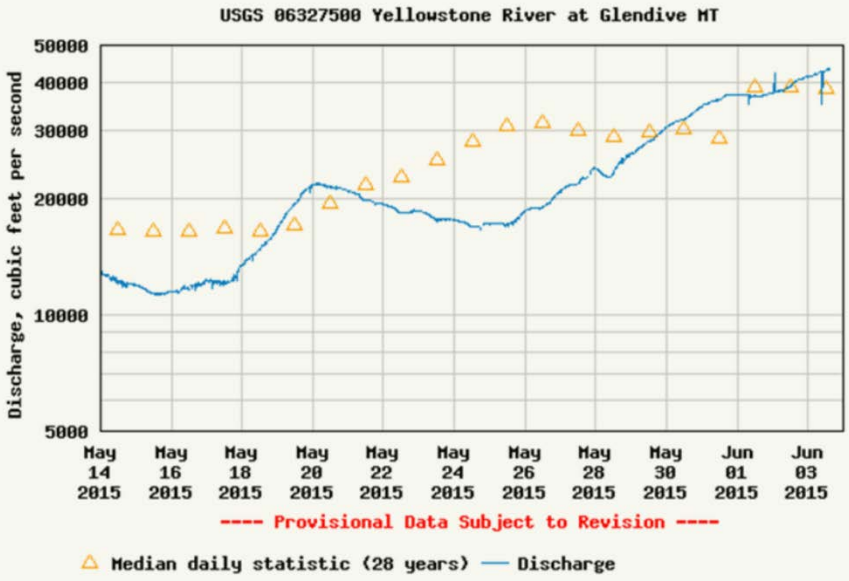

Big Dry Creek
Big Porcupine Creek
Rosebud Creek
Tongue River
Wolf Mountain Creek
Powder River
Yellowstone River
Prairie Dog Creek
Crazy Woman Creek
Bowdoin Creek
Region 7

2015 Paddlefish Harvest Summary

Date	Intake	Down Stream	Day Total	Non Reported	River Total	Processed Fish Males	Females	Total	% Female
Friday May 15	0	19	**19**	5	**24**	13	**5**	18	**27.8**
Saturday May 16	0	10	**10**	3	**13**	4	**6**	10	**60.0**
Tuesday May 19	0	23	**23**	6	**29**	11	**12**	23	**52.2**
Wednesday May 20	0	20	**20**	5	**25**	12	**6**	18	**33.3**
Friday May 22	4	26	**30**	8	**38**	9	**21**	30	**70.0**
Saturday May 23	7	48	**55**	14	**69**	14	**41**	55	**74.5**
Tuesday May 26	23	7	**30**	8	**38**	4	**26**	30	**86.7**
Wednesday May 27	57	14	**71**	14	**85**	22	**49**	71	**69.0**
Friday May 29	165	12	**177**	35	**212**	48	**129**	177	**72.9**
Saturday May 30	177	20	**197**	39	**236**	67	**130**	197	**66.0**
Tuesday June 2	97	10	**107**	21	**128**	37	**70**	107	**65.4**
Wednesday June 3	29	3	**32**	6	**38**	5	**27**	32	**84.4**
Total	**559**	**212**	**771**	**163**	**934**	**246**	**522**	**768**	**68.0**

Discharge, cubic feet per second

Most recent instantaneous value: 43,600 06-03-2015 15:00 MDT



Montana Fish, Wildlife & Parks

How to Stay Informed

Montana Fish, Wildlife & Parks

Summary

- Keeping a close eye on streamflows in west and northwest Montana. Plan on engaging with water users to encourage the development of community drought plans.
- FWP will be cooperating with watershed in administering their drought management plans on the Big Hole, Jefferson and Blackfoot Rivers.
- Monitoring temperatures, thermographs on key stream reaches should be completely deployed by July 1. FWP's policy for initiating fishing restrictions and closures is in ARM 12.5.501-509.
- Paddlefish take was delayed due to low streamflows this spring, but conditions did improve and anglers harvested 934 fish.

Montana Fish, Wildlife & Parks

Governor's Drought & Water Supply Advisory Committee
June NRCC Update

Harold Gemmell, Direct Fire Protection Coordinator
DNRC

hgemmell@mt.gov 406 329-4996


6/14/07 10:25
Fire


6/14/07 10:37


6/14/07 11:42


6/14/07 15:10


6/11/08 15:29

NATIONAL **7-DAY** SIGNIFICANT FIRE POTENTIAL

Login

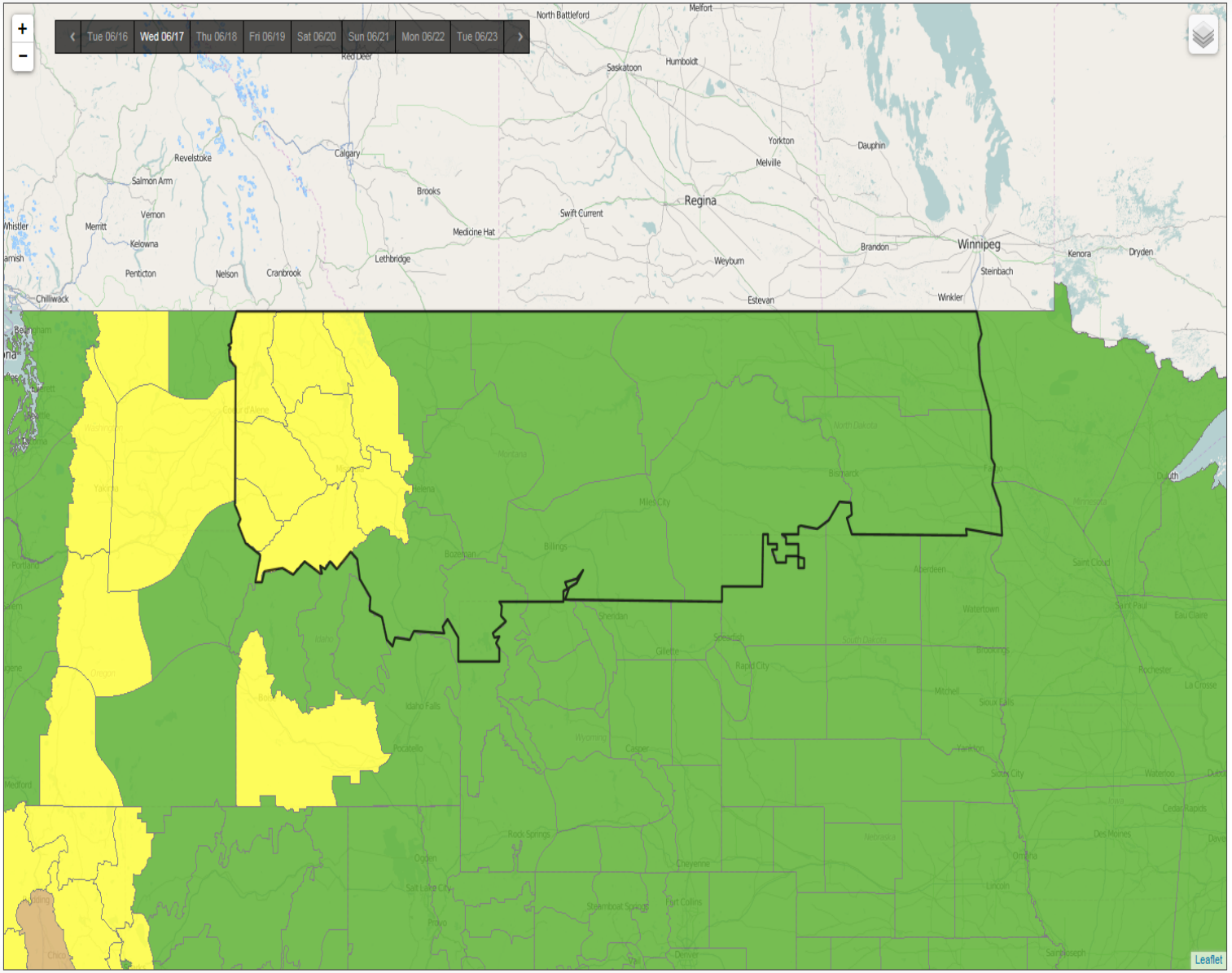
Geographic Area

- *National*
- Alaska
- California North Ops
- California South Ops
- Eastern Area
- Great Basin
- Northern Rockies
- Northwest
- Rocky Mountain
- Southern Area
- Southwest

Map | Side-by-Side

Forecast

Choose Forecast Issuance Date



Legend

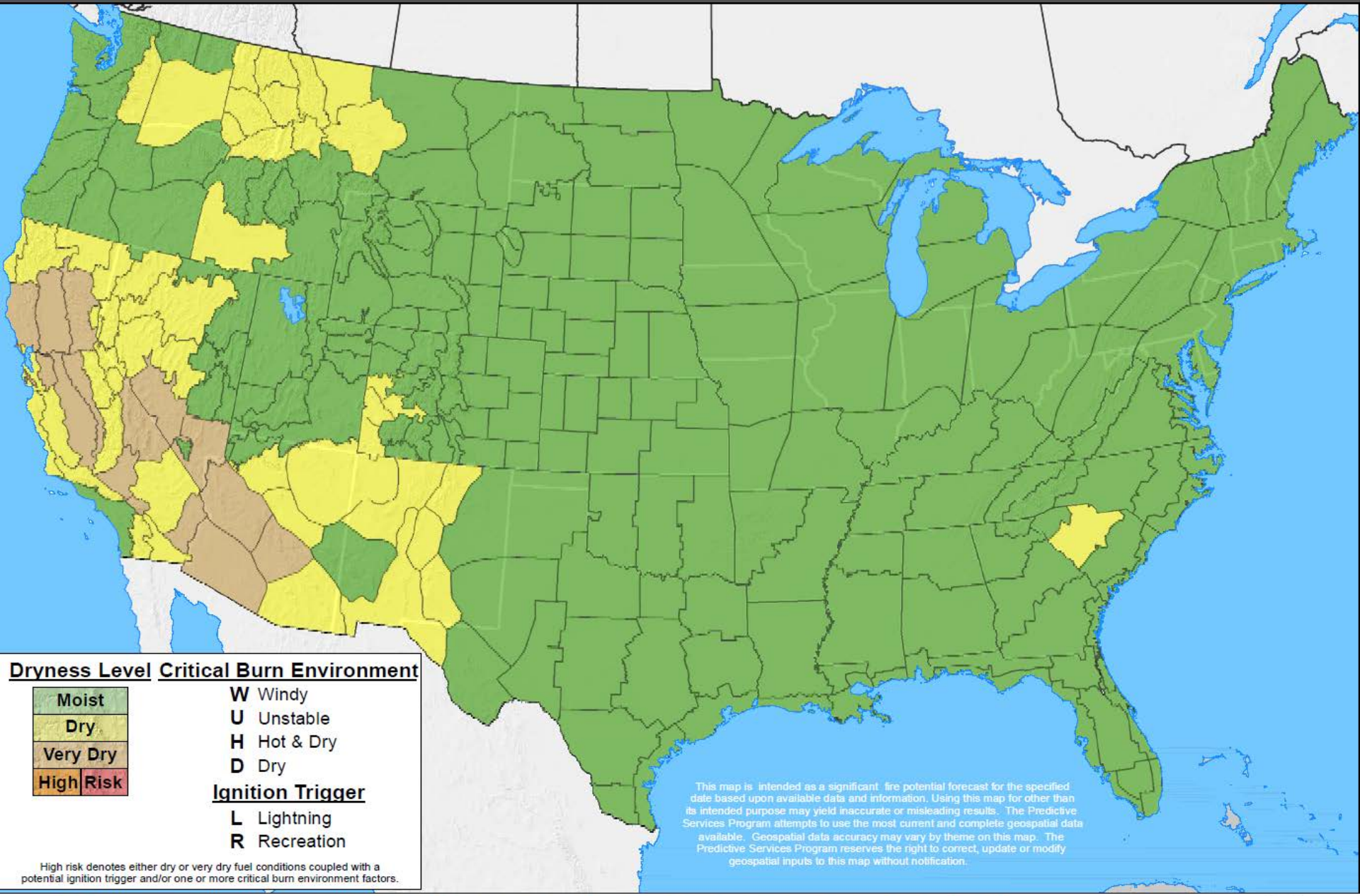
Fuel Dryness

- No Data
- Moist
- Dry
- Very dry

Triggers

- H H
- U U
- W W
- D D
- L L
- R R

National Interagency Coordination Center
National Interagency Fire Center
3833 S Development Avenue, Boise, ID 83705



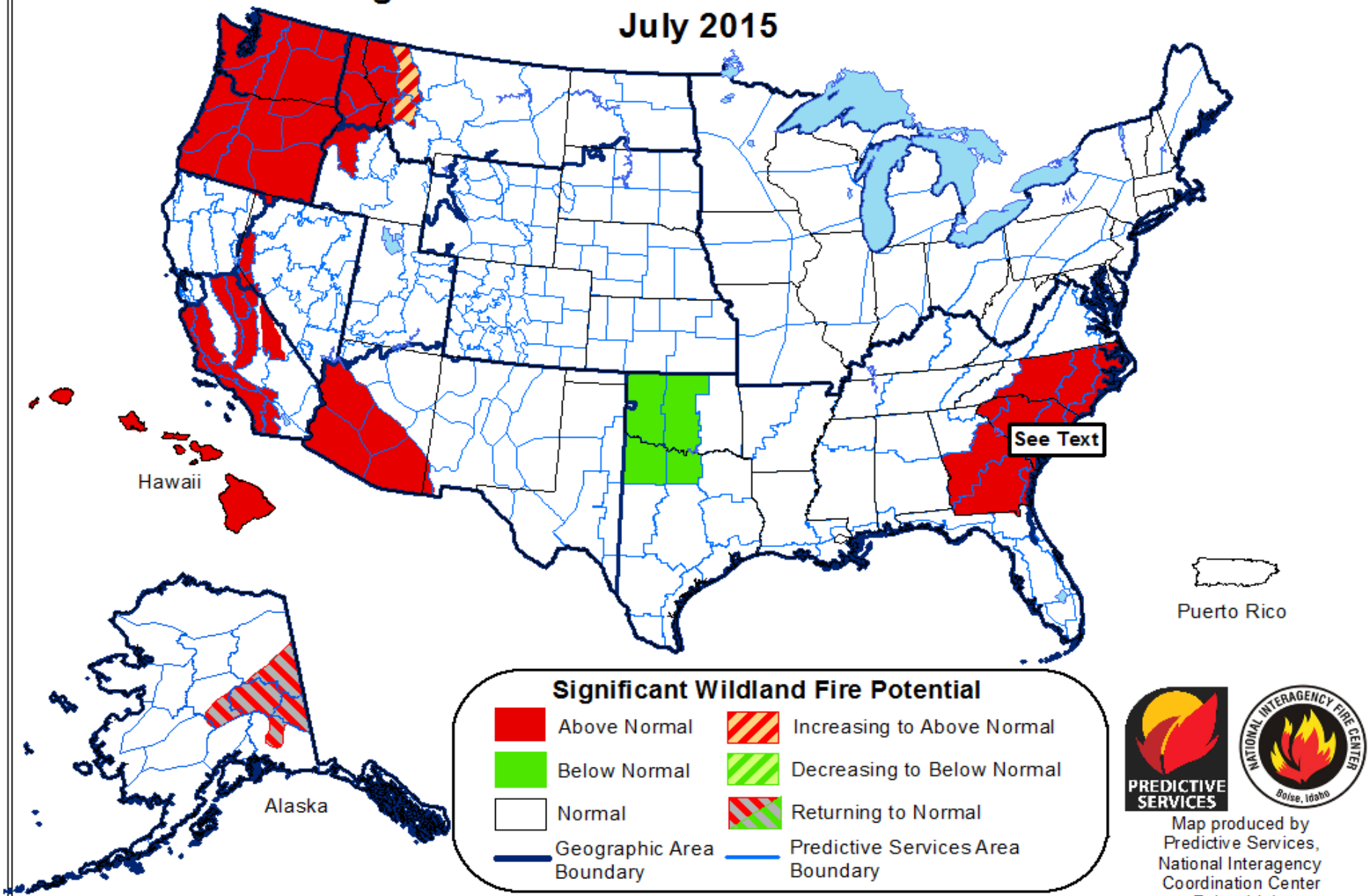
SIGNIFICANT FIRE POTENTIAL

Valid For: Tuesday, June 23, 2015

Issued On: Wednesday, June 17, 2015 12:33 PM (MT)

Map produced by the USDA Forest Service Remote Sensing Applications Center in coordination with the National Predictive Services Program

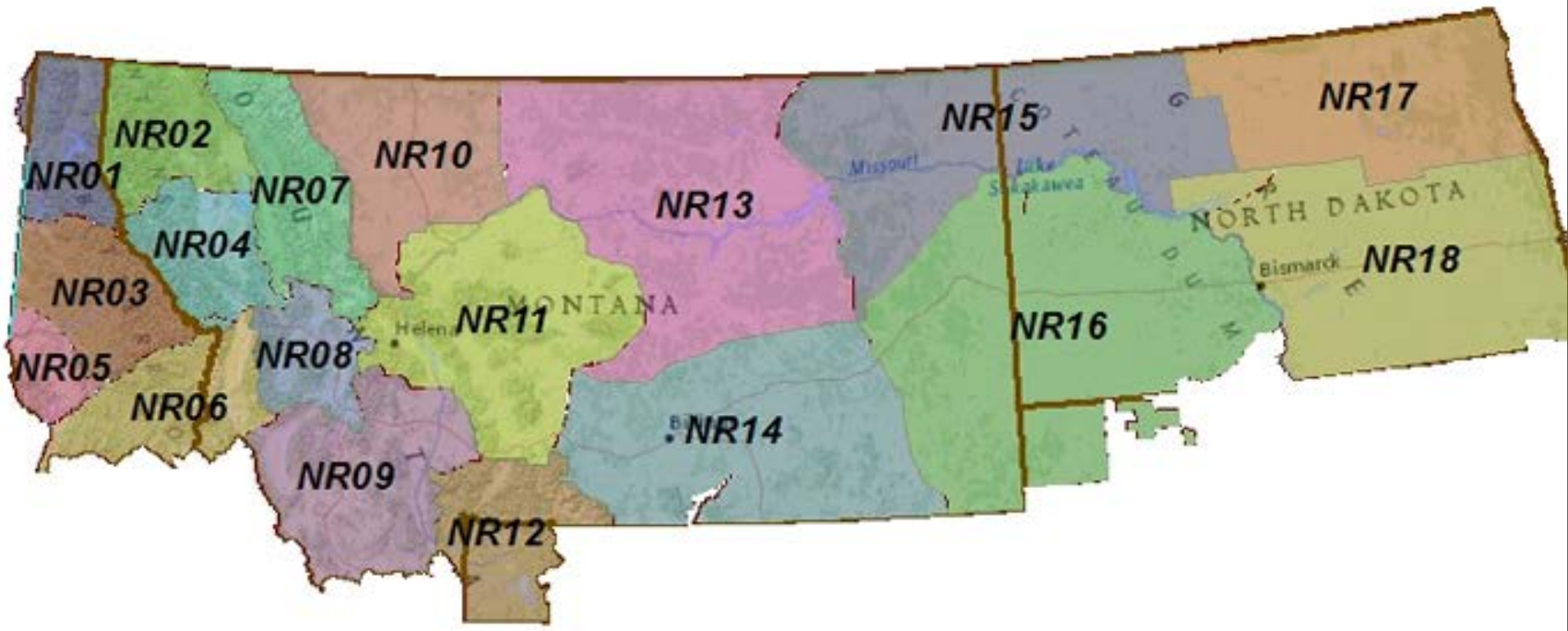
Significant Wildland Fire Potential Outlook
July 2015



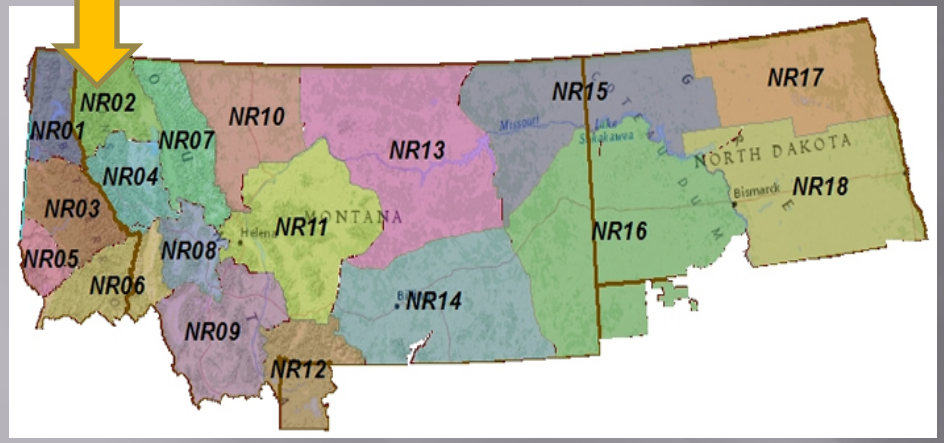
Above normal significant wildland fire potential indicates a higher than usual likelihood that wildland fires will occur and/or become significant events. Wildland fires are still expected to occur during forecasted normal conditions as would usually be expected during the outlook period. Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Map produced by
Predictive Services,
National Interagency
Coordination Center
Boise, Idaho
Issued June 1, 2015
Next issuance July 1, 2015

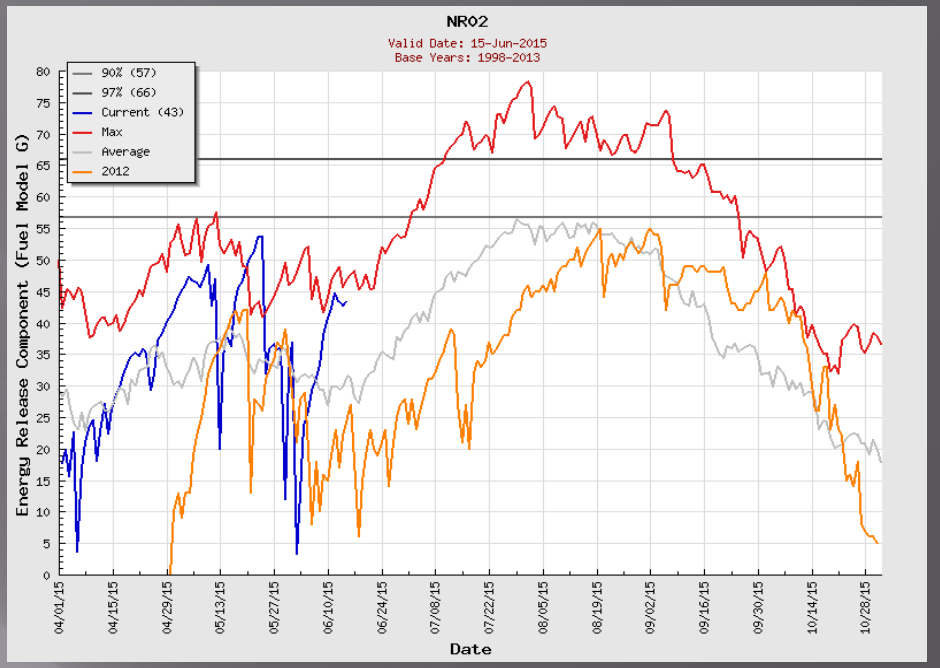
NORTHERN ROCKIES GEOGRAPHIC AREA
PREDICTIVE SERVICE AREAS

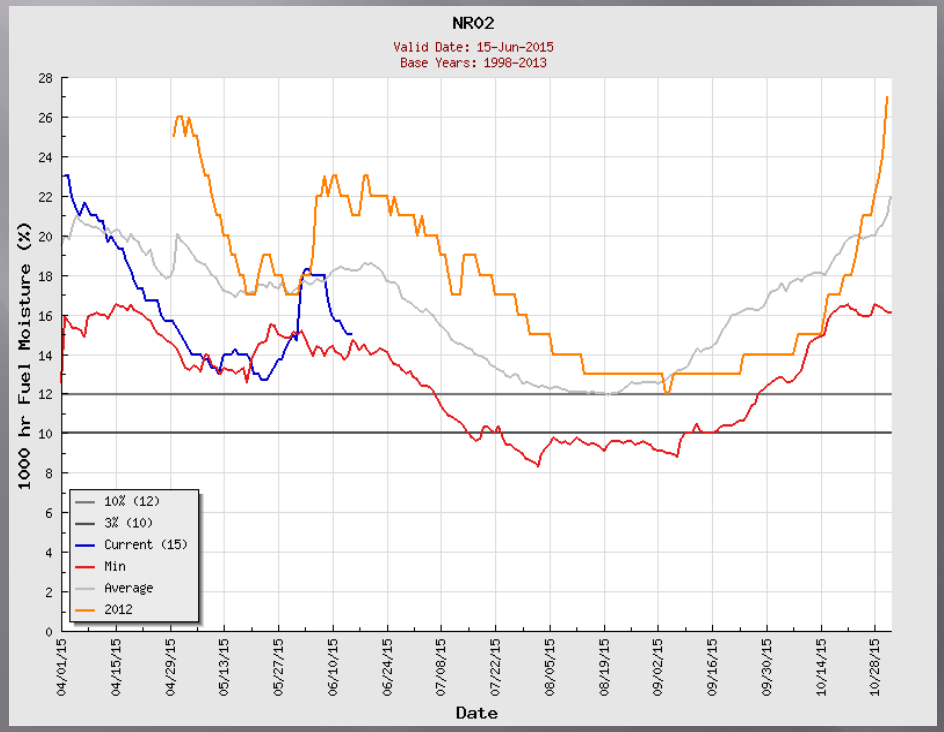


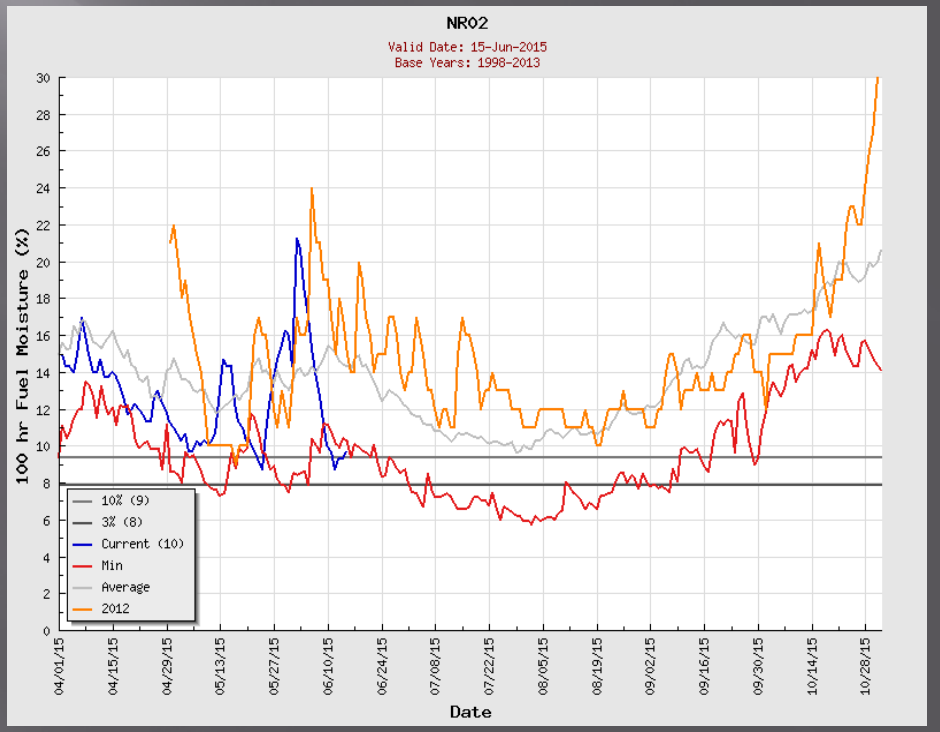
NR02 - Northwestern Montana



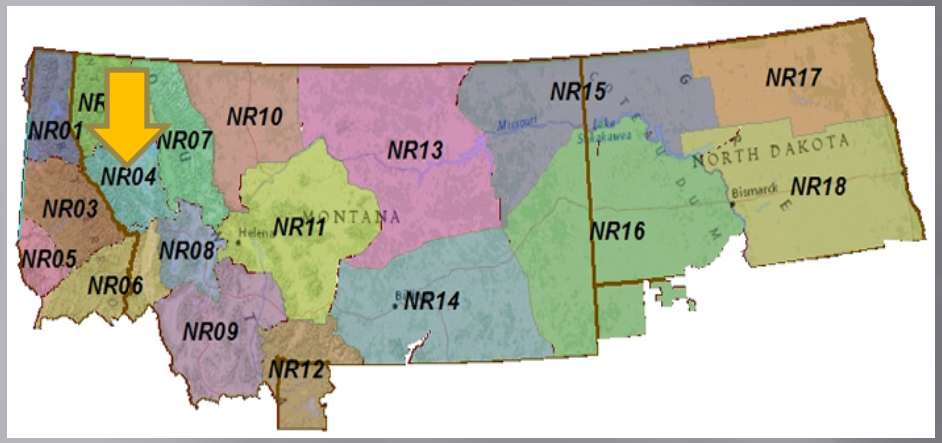
Libby Ranger Station
Troy Ranger Station
Eureka Ranger Station





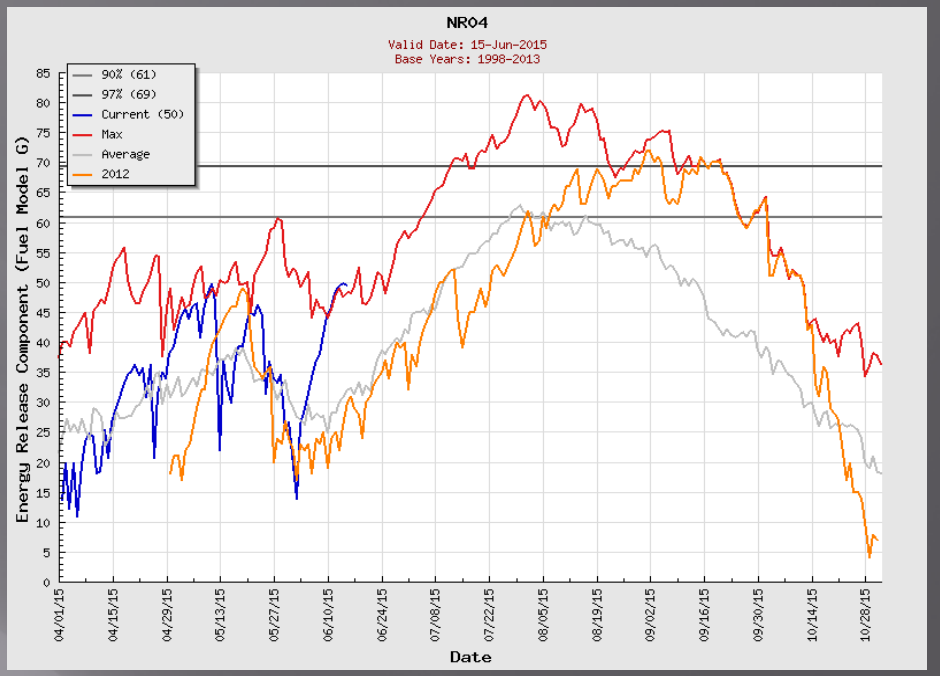


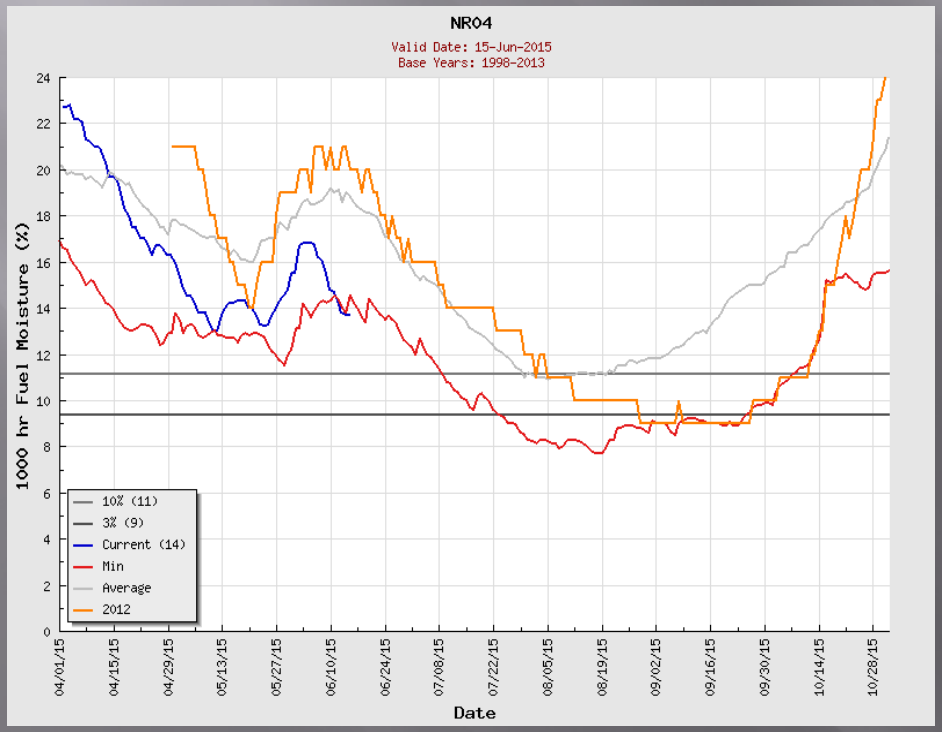
NR04 – Western Montana

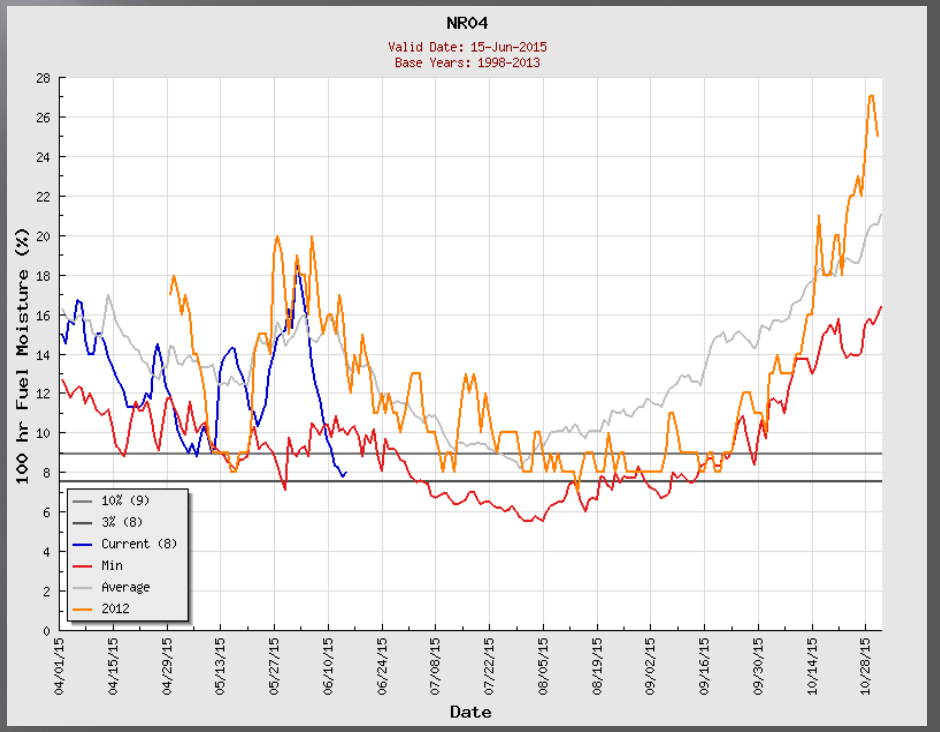


Plains
Missoula
St. Regis

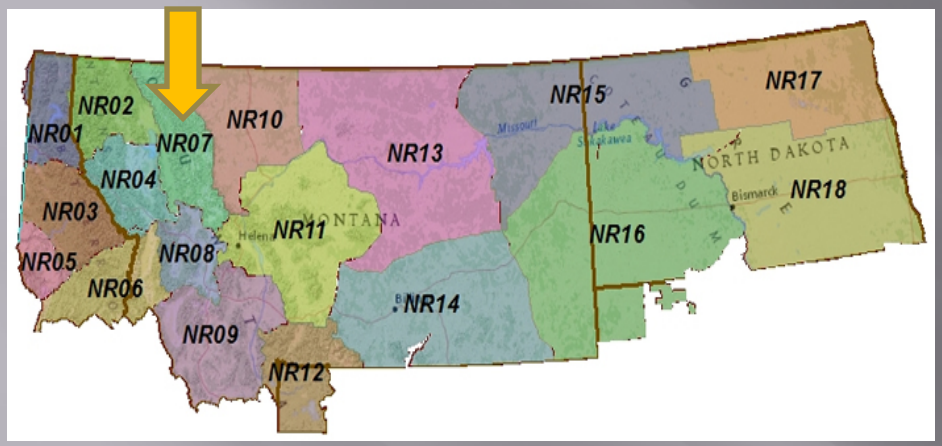
Hot Springs
Nine Mile



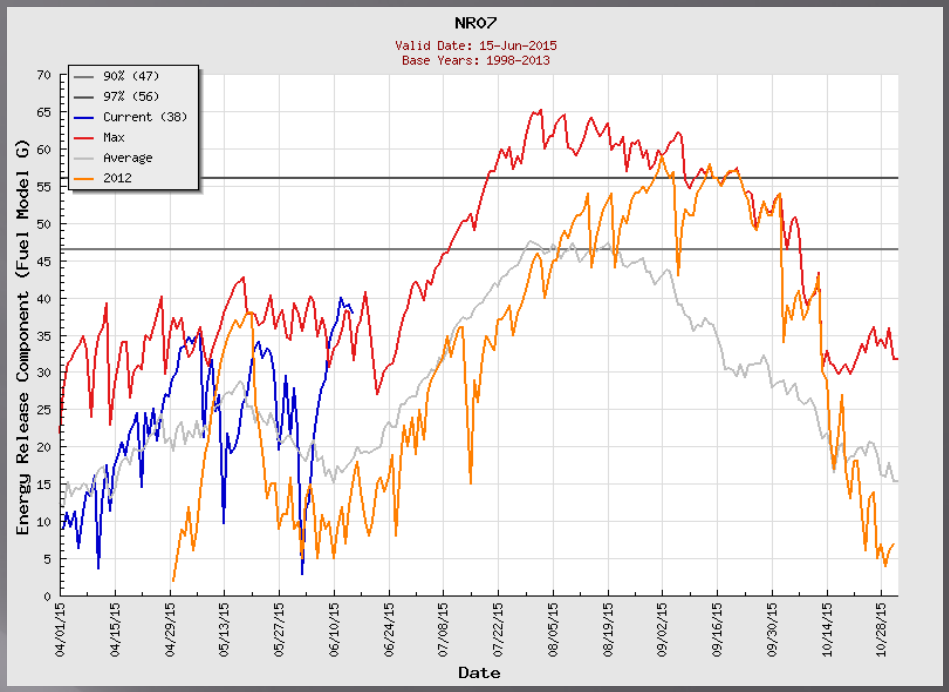


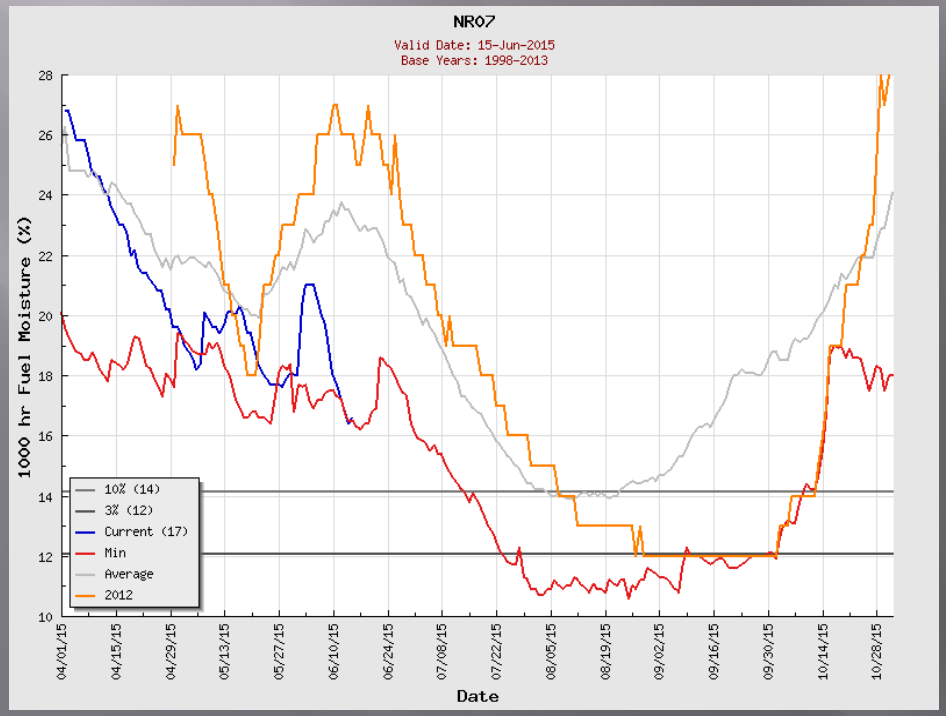


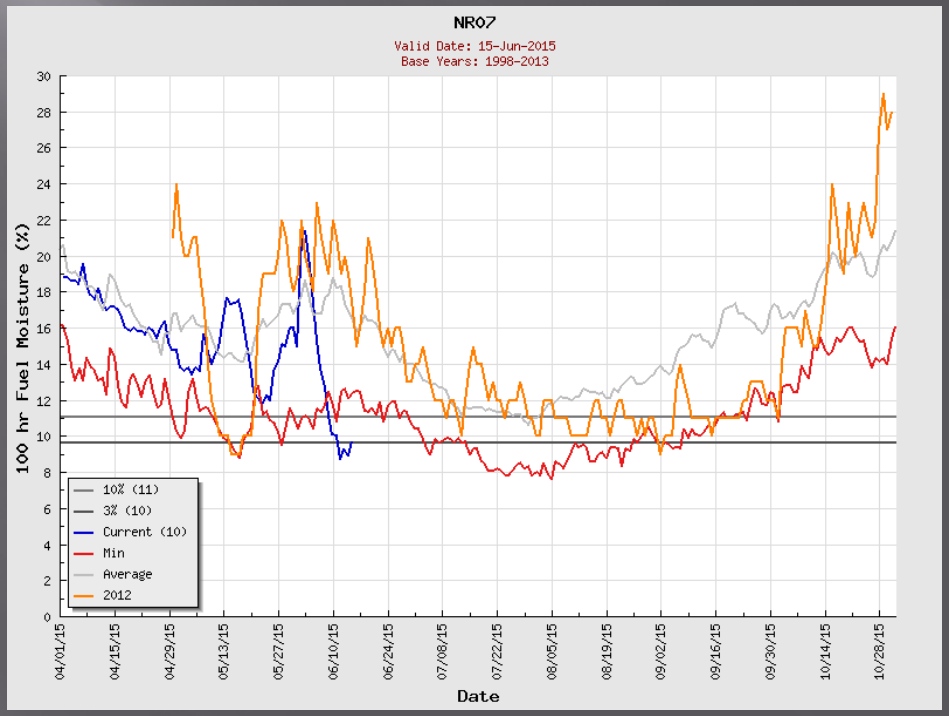
NR07 - Glacier National Park and Wilderness Areas



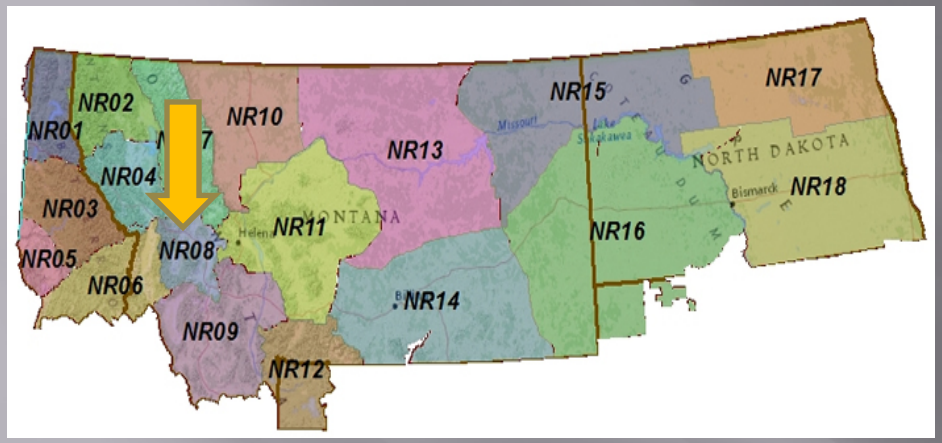
West Glacier
Cyclone
Condon Work Center
Hungry Horse
Benchmark



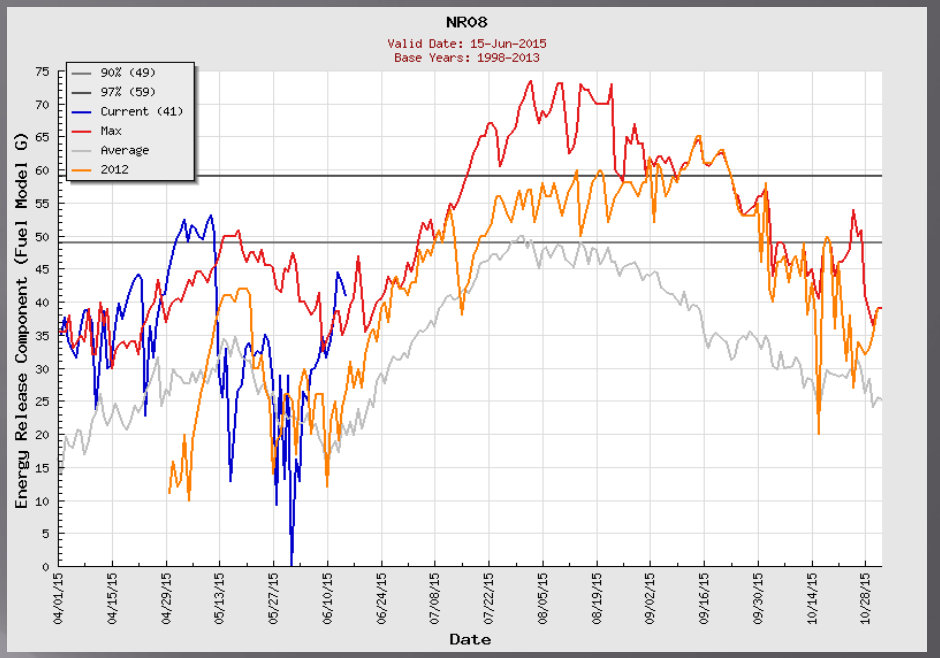


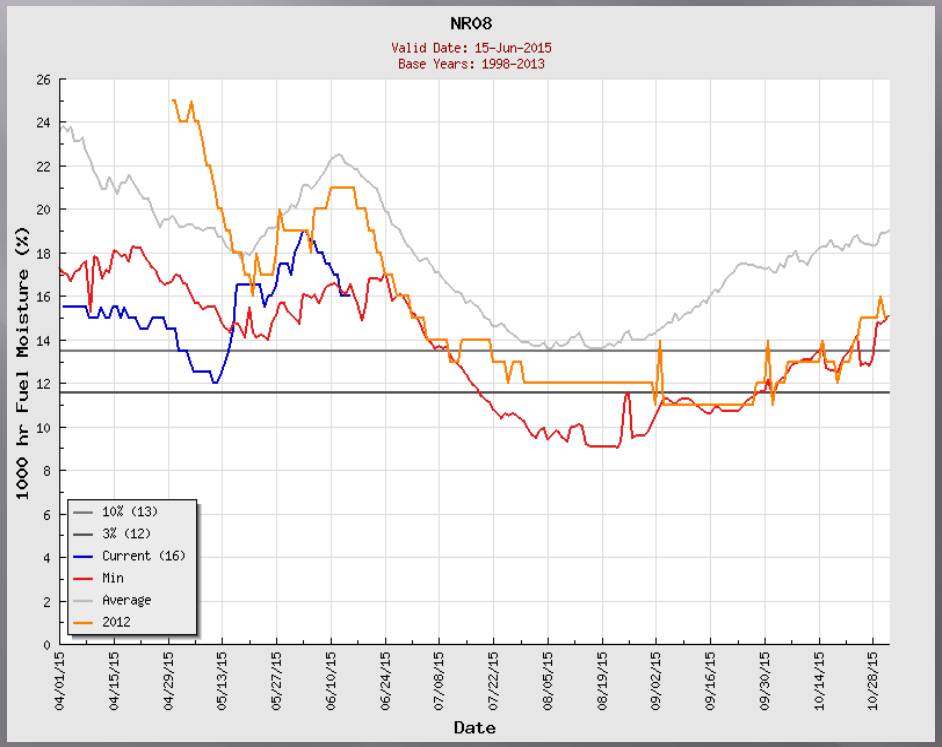


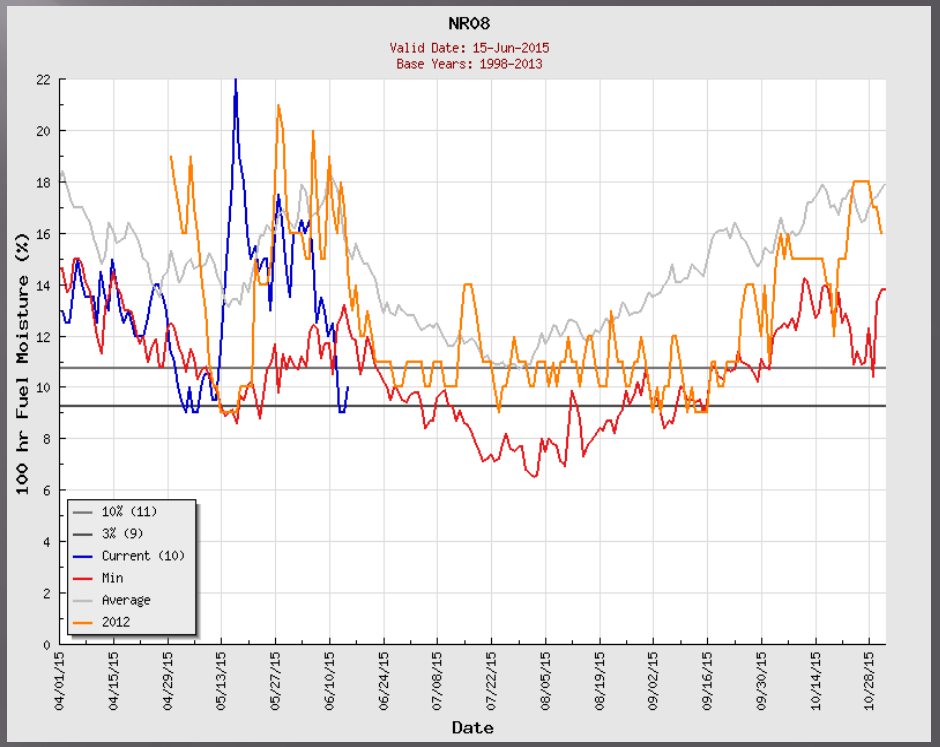
NR08 – Southwest Montana, West of Continental Divide



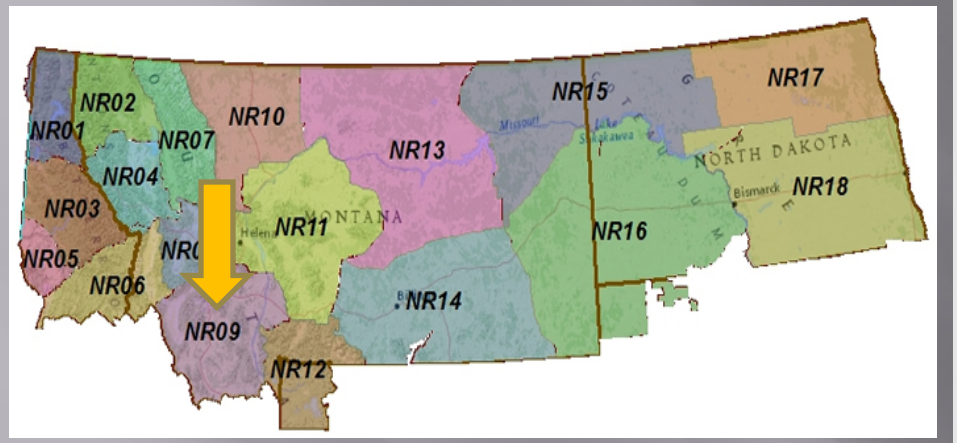
Lincoln
Phillipsburg





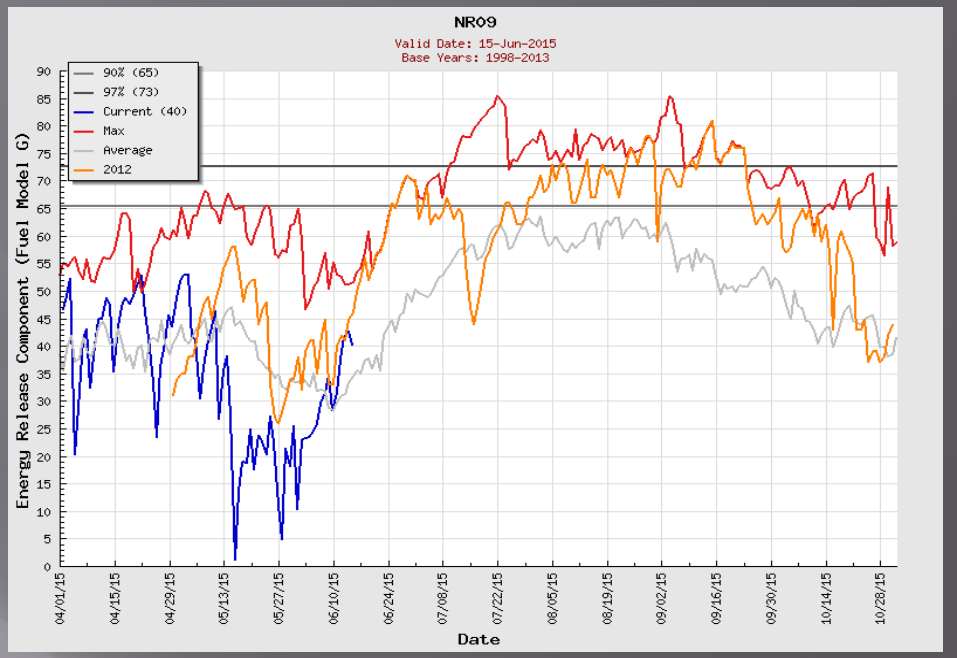


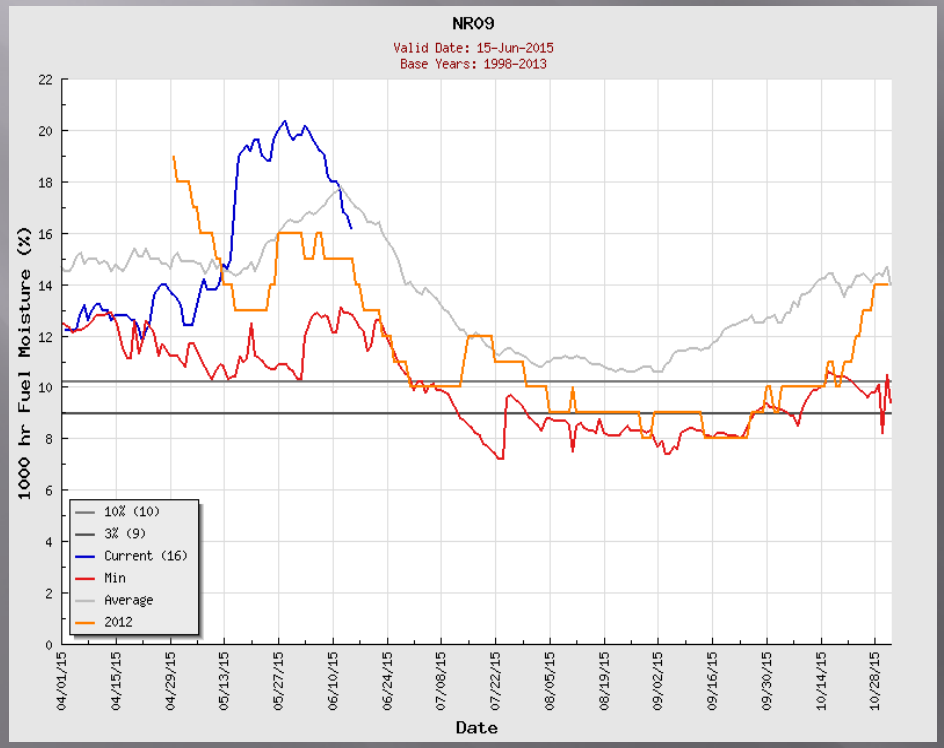
NR09 – Big Hole, Southwest Montana East of Continental Divide

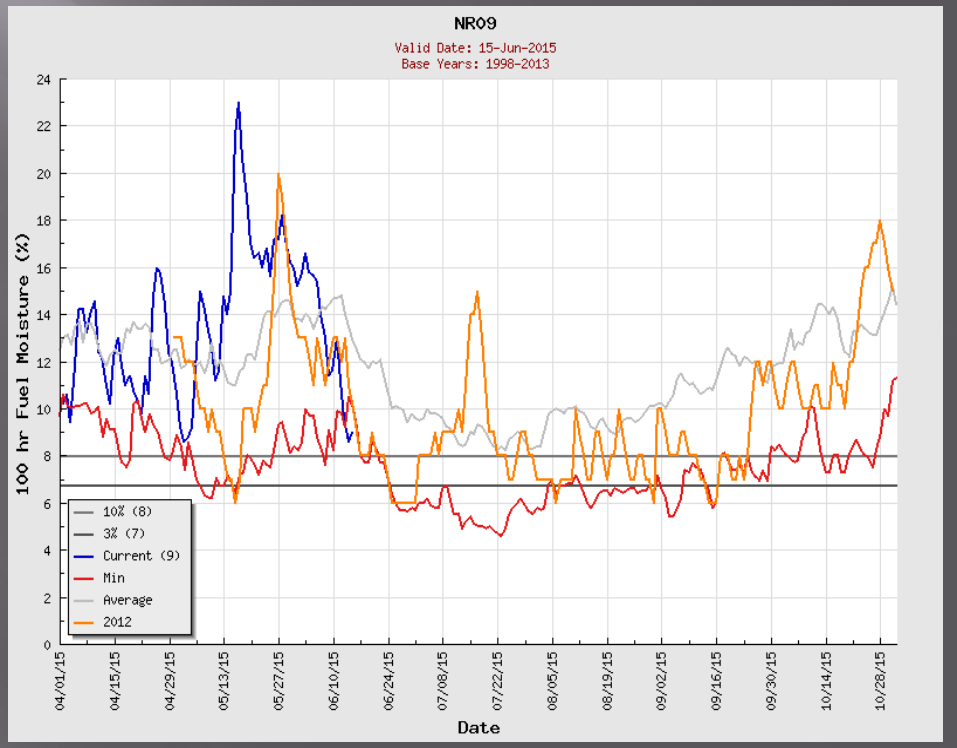


Jefferson
Brenner

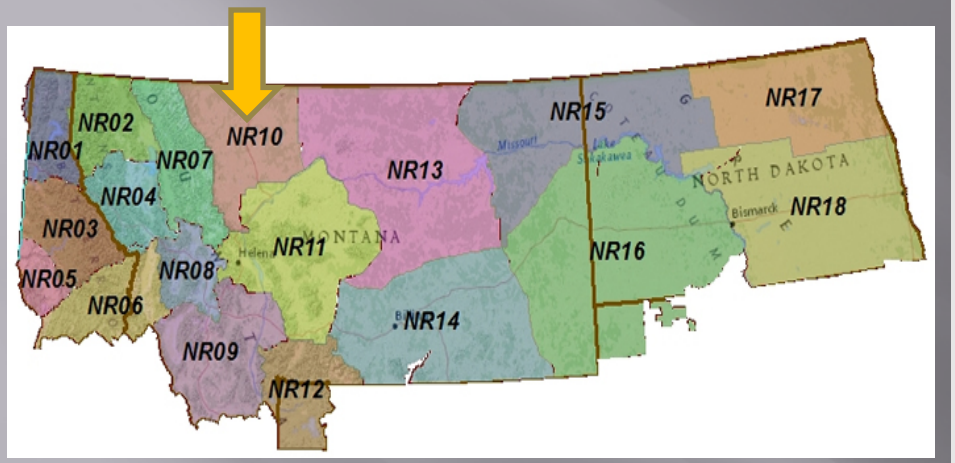
Ennis
Wise River



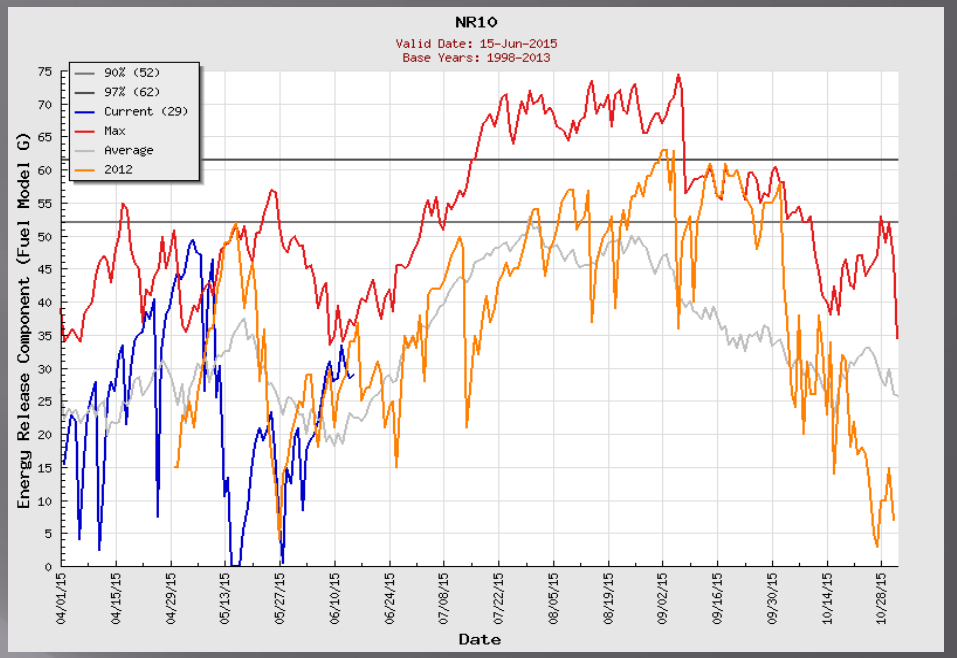


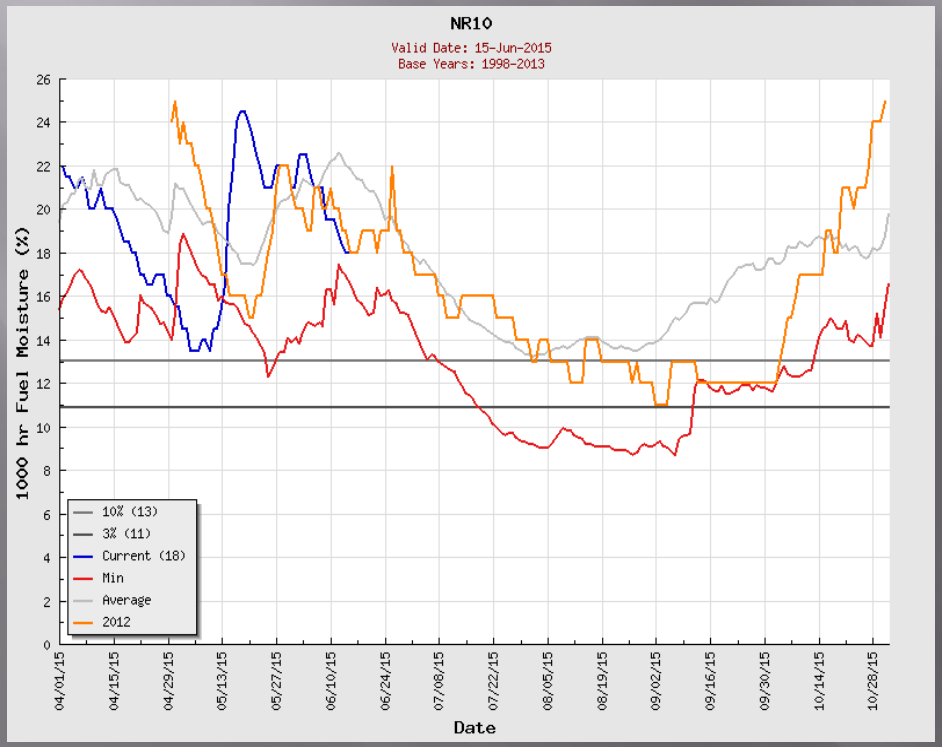


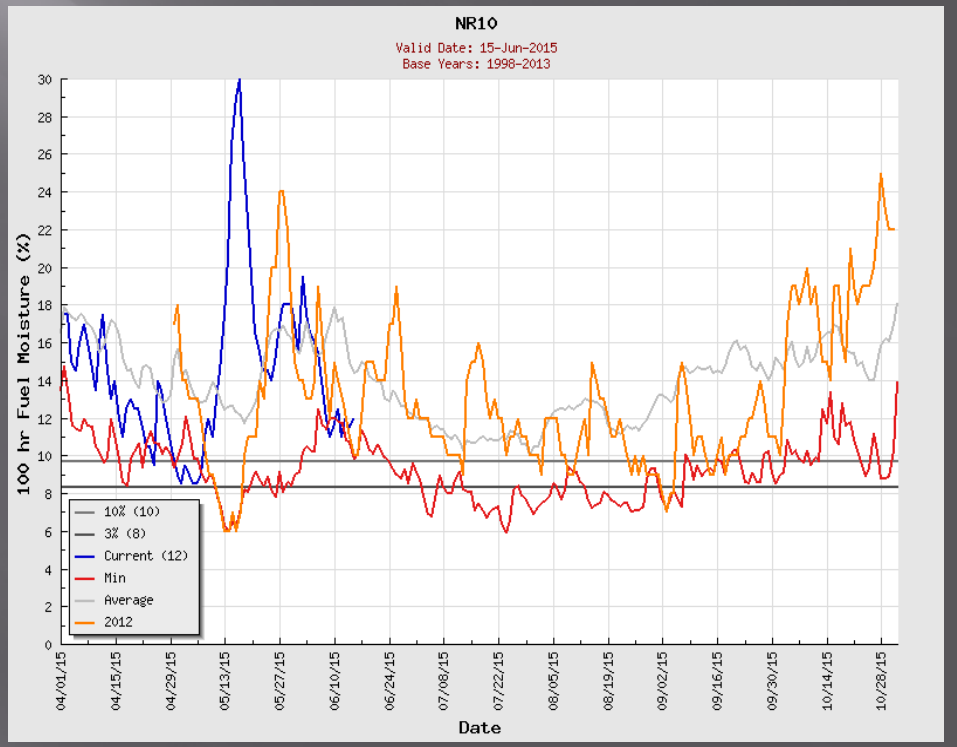
NR10 – Northern Front Range



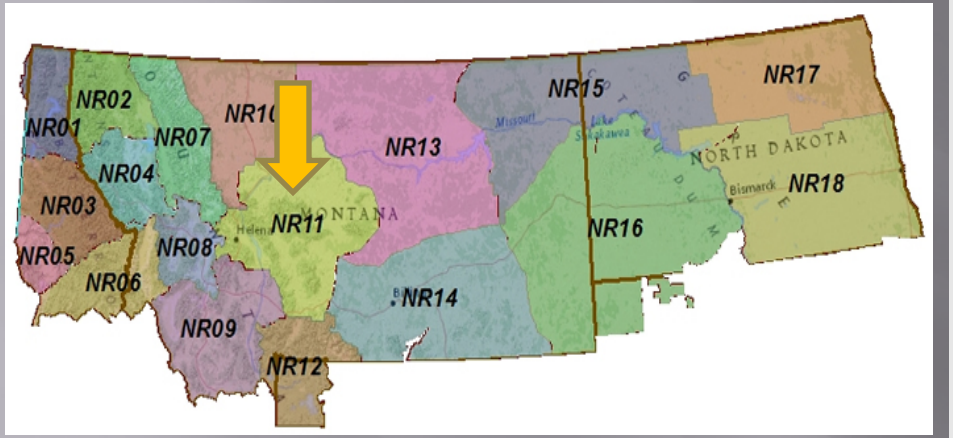
St. Mary
Gleason



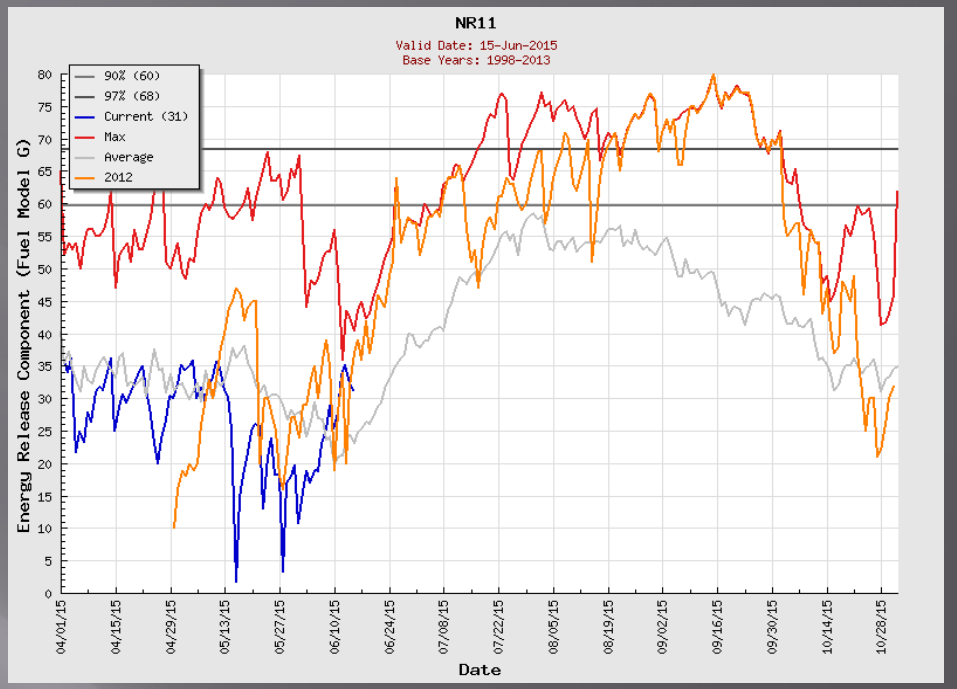


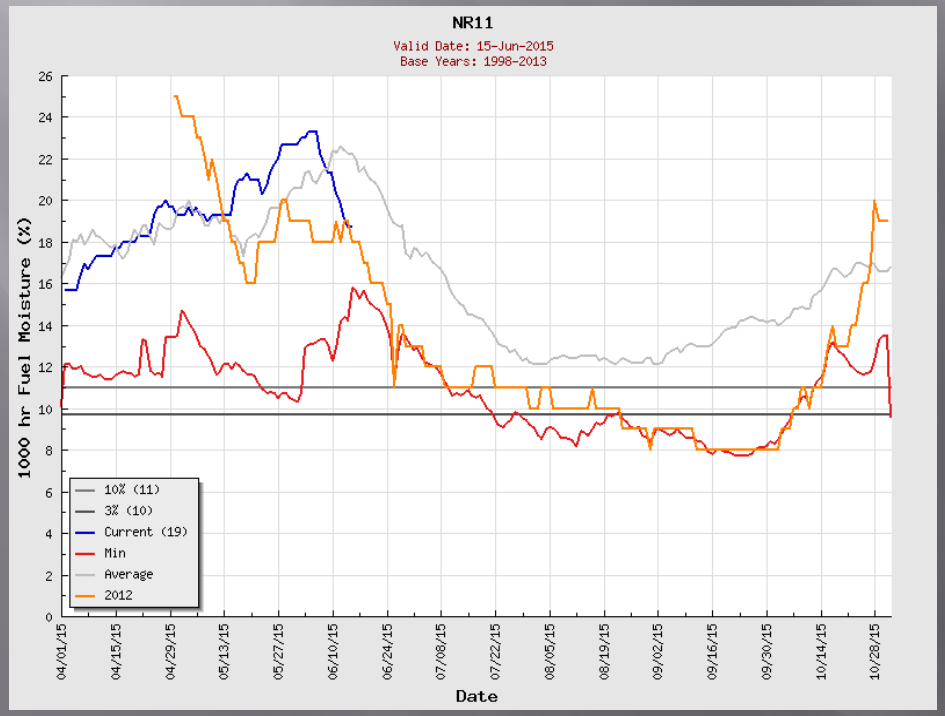


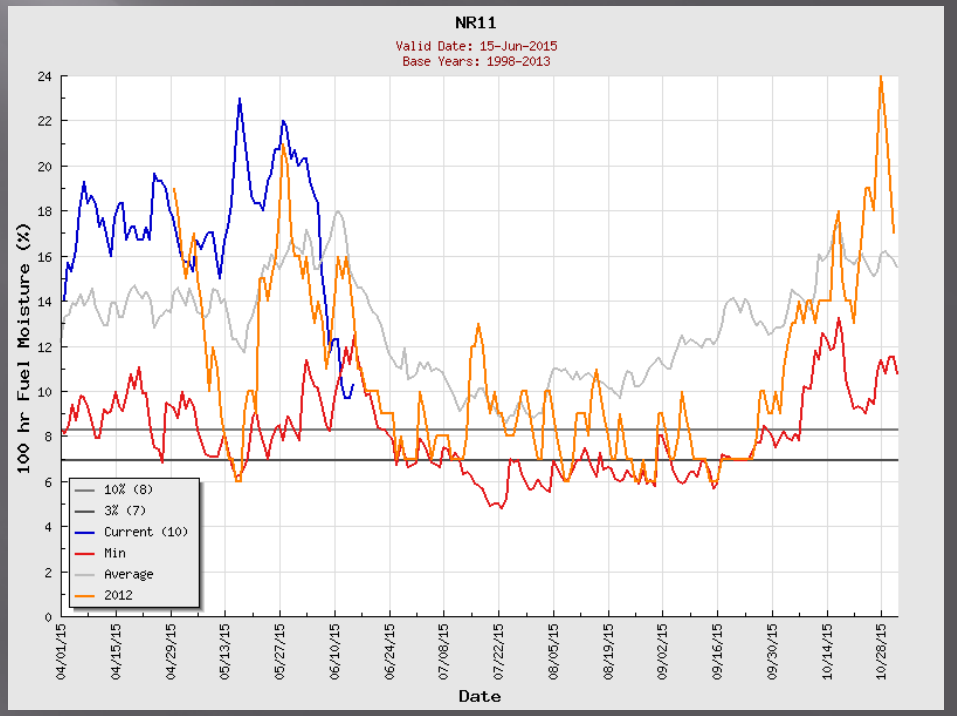
NR11 – West Central Montana



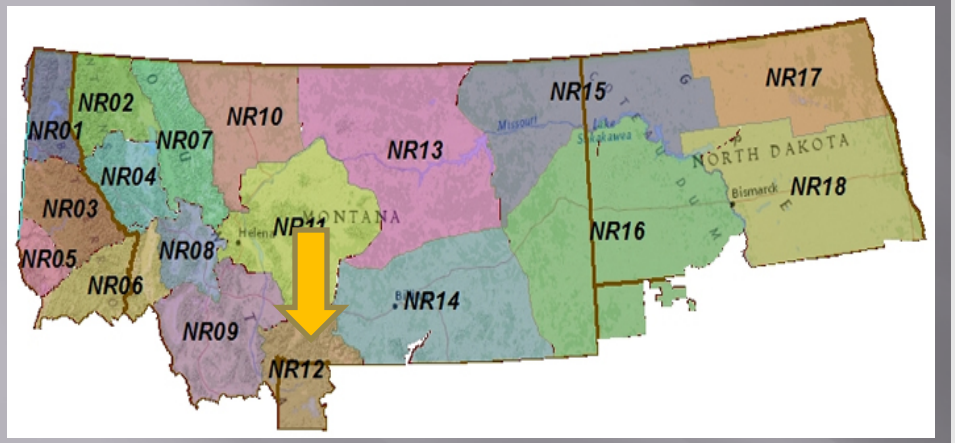
Helena
Porphyry
White Sulphur Springs



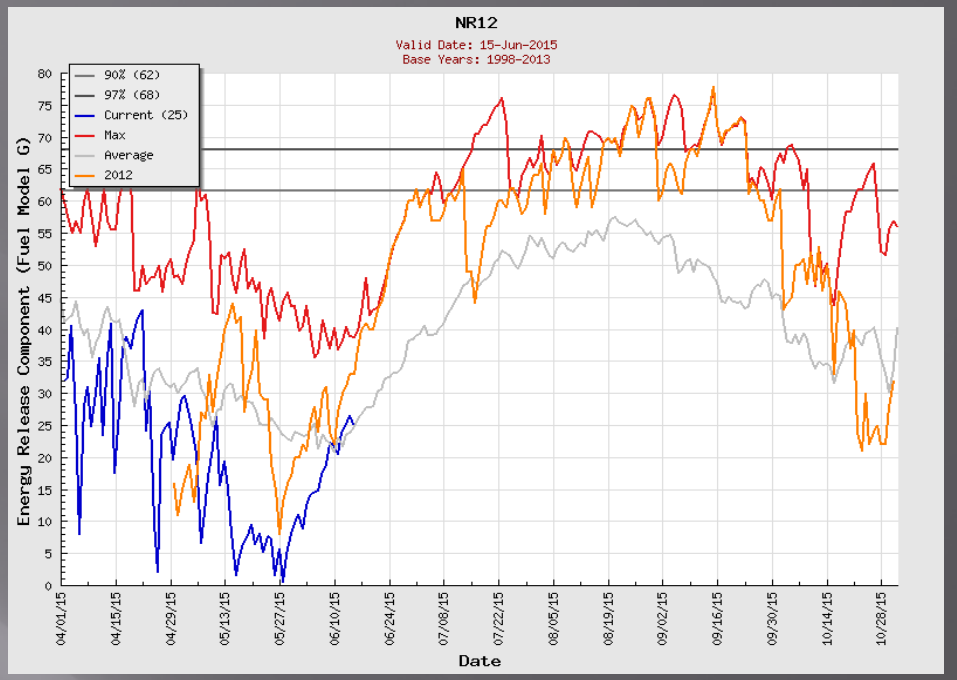


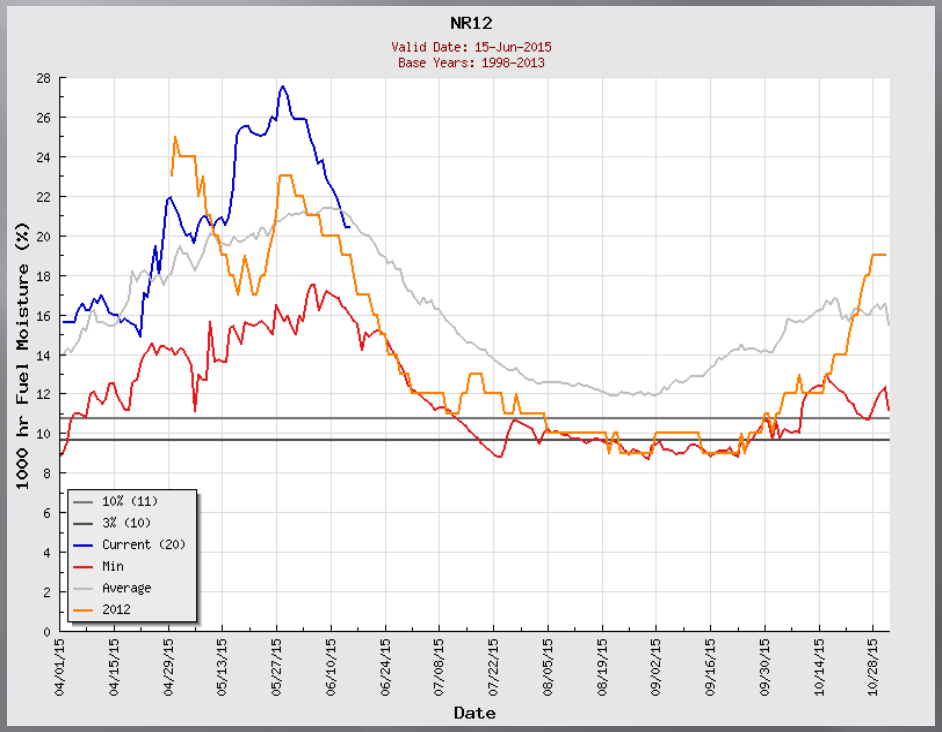


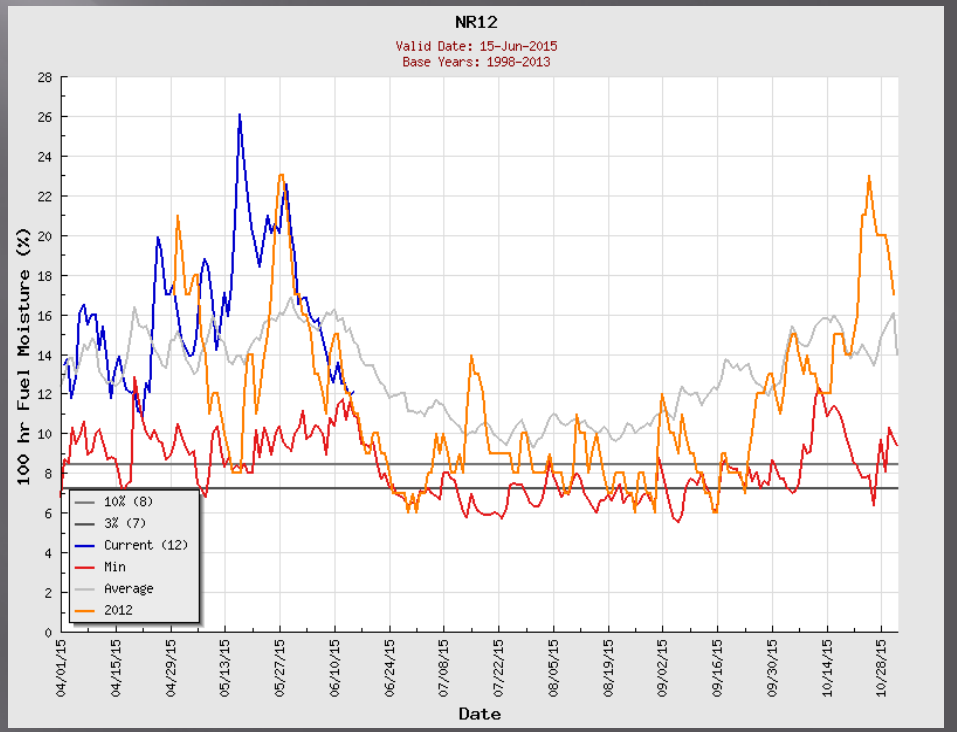
NR12 – South Central Montana and Yellowstone YP



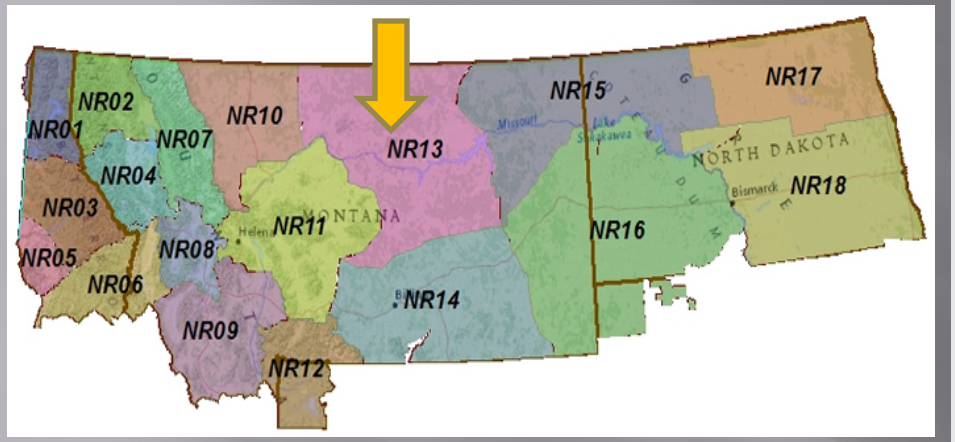
Shenango
Fishtail
Bechler
Hebgen Lake
Timbercrest
Quadrant



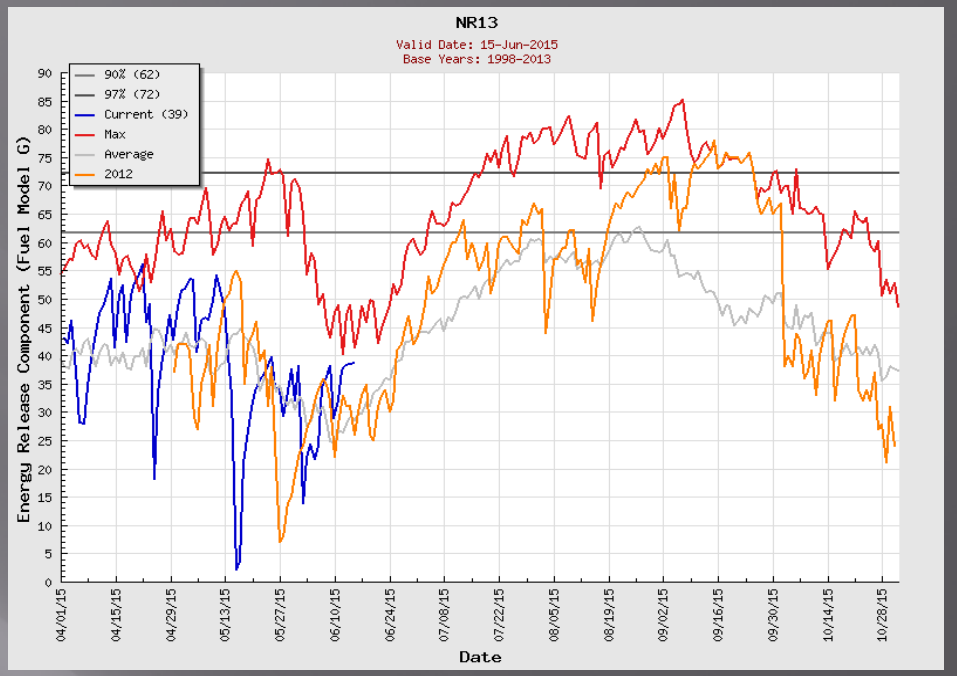


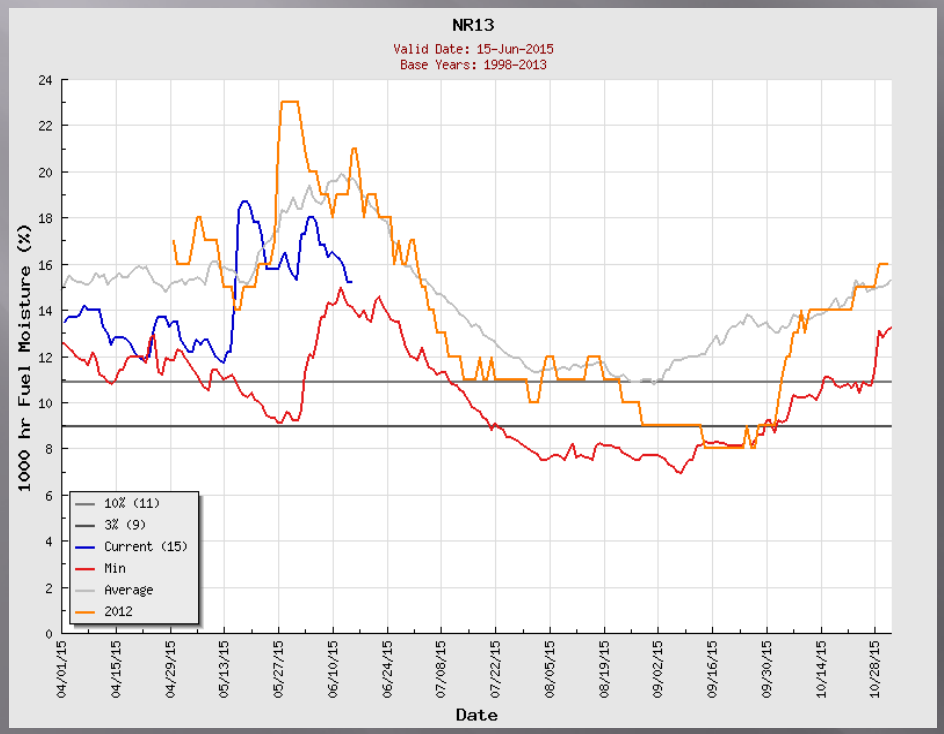


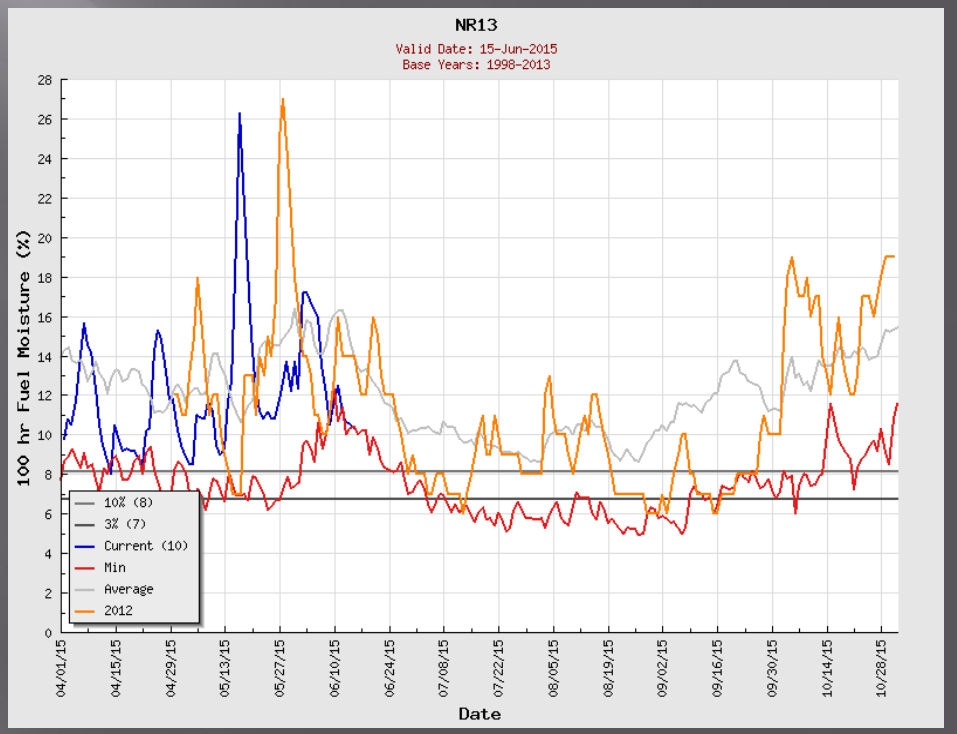
NR13 – Northern Plains and Missouri Breaks



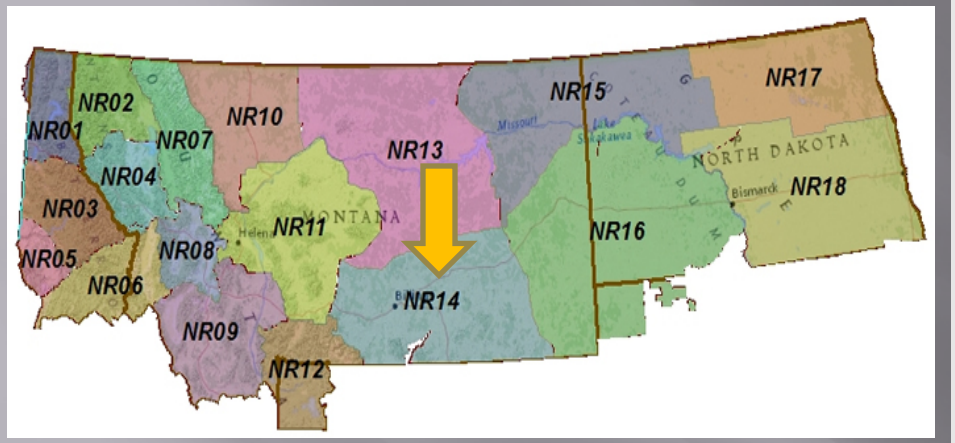
Rocky Boy
Bluff Creek
Armells Creek
Little Bullwhacker
King Coulee
South Sawmill Creek





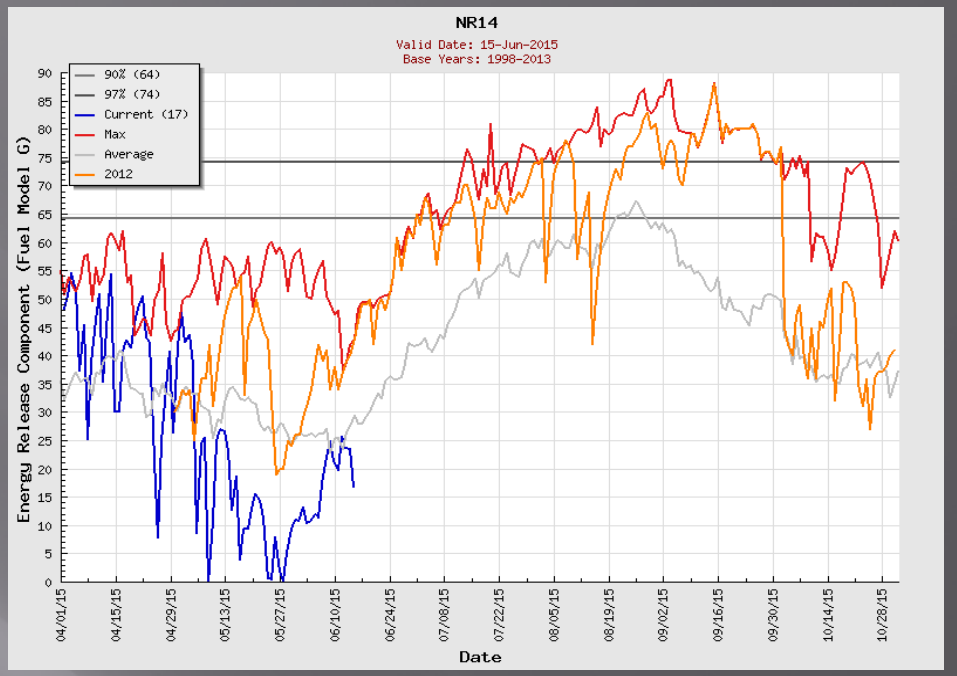


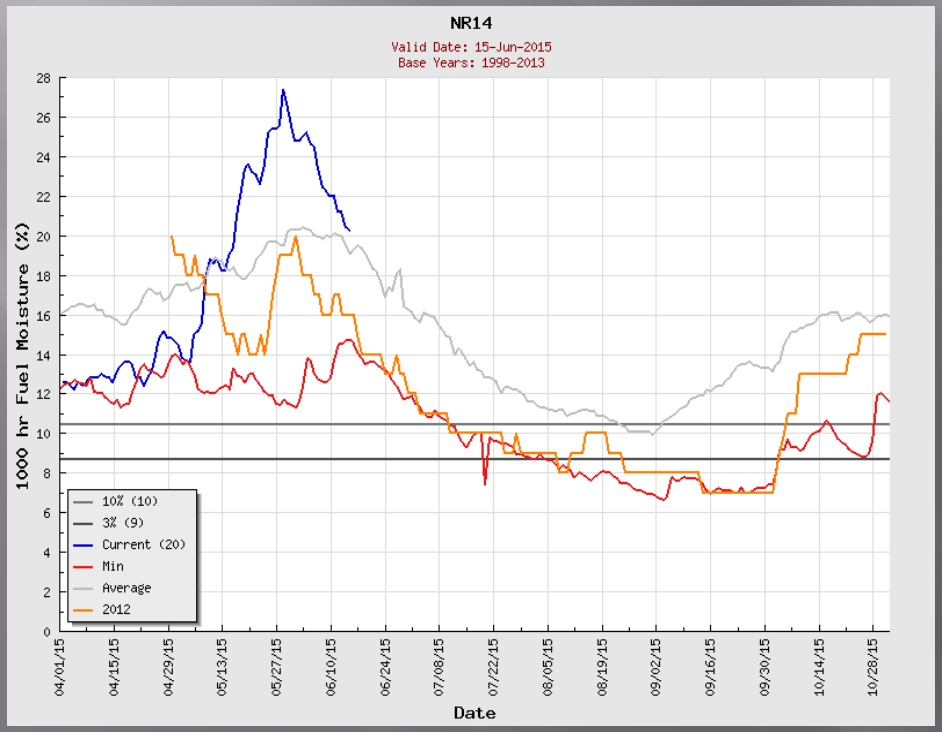
NR14 – Southern Montana (Big Horn/Powder River)

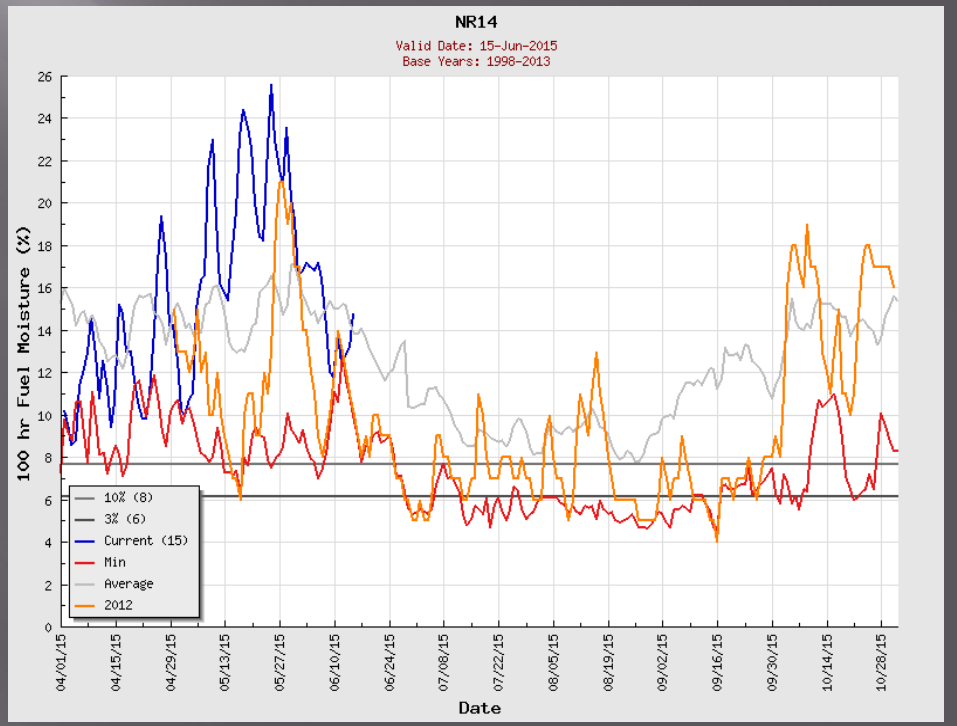


Wolf Mountain
Bighorn Mountain
Fort Howes

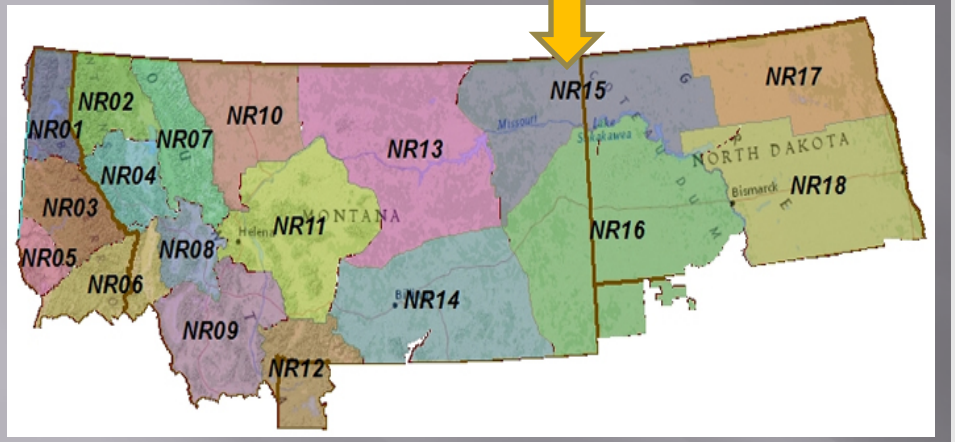
Pryor Mountain
Badger Peak





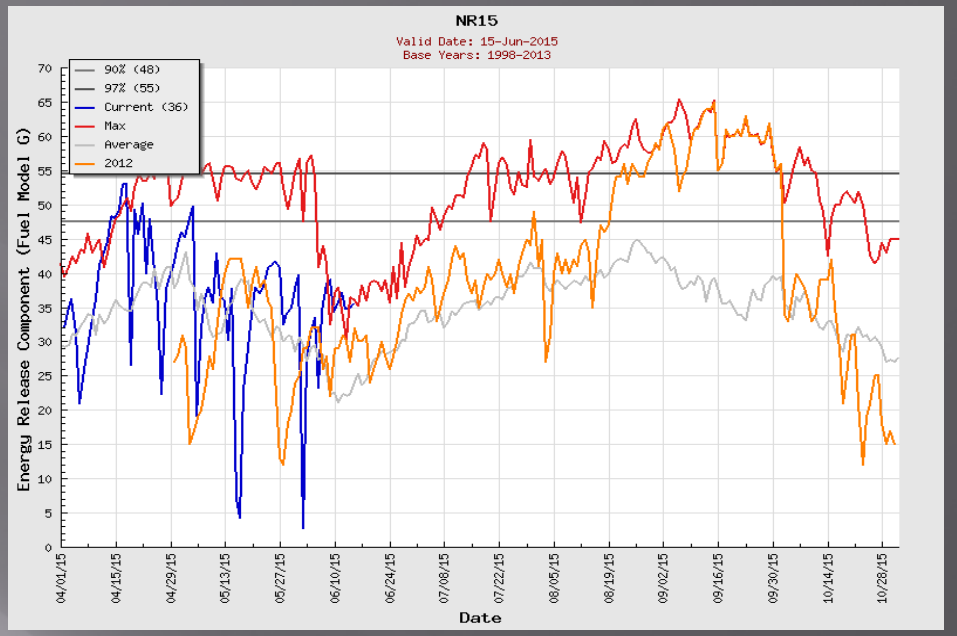


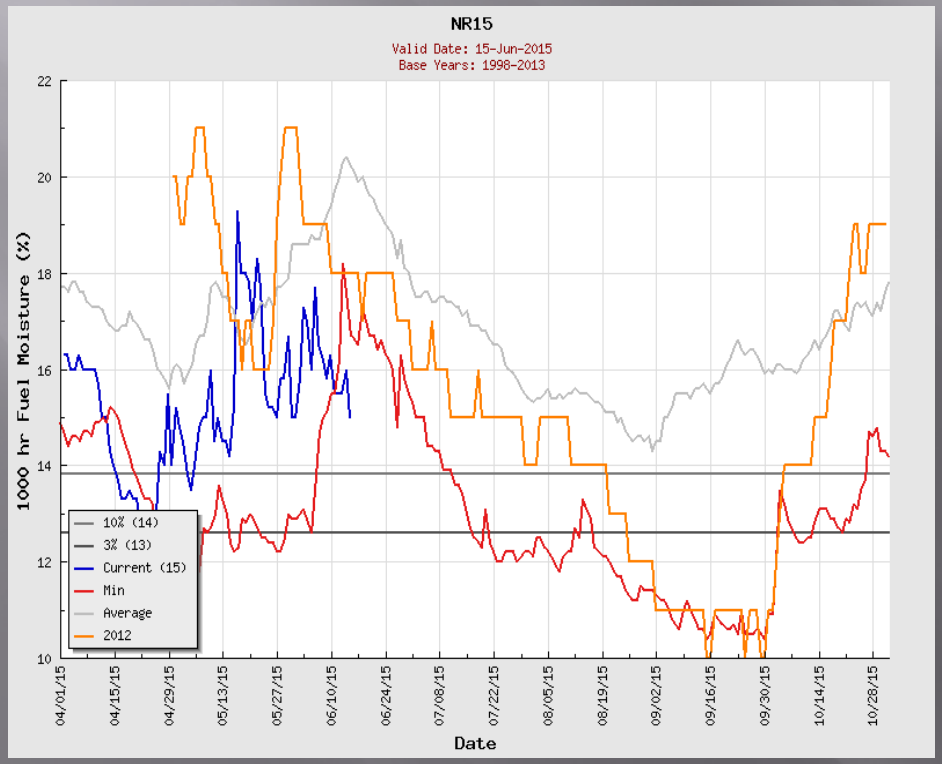
NR15 – Northeast Montana/Northwest North Dakota

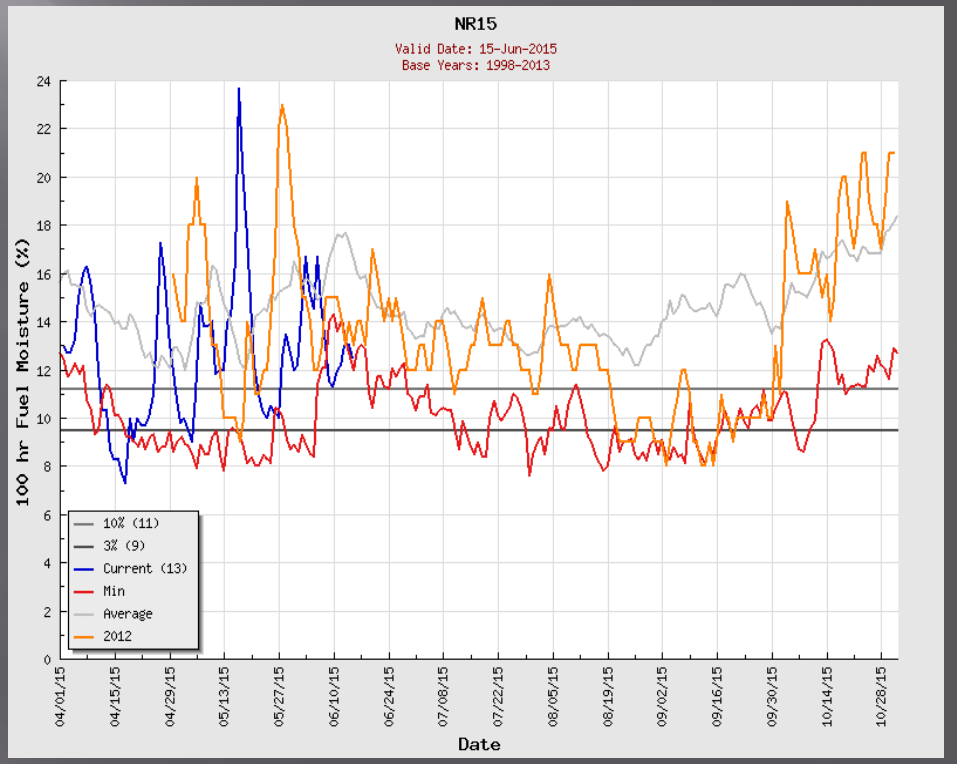


Poplar
Lostwood

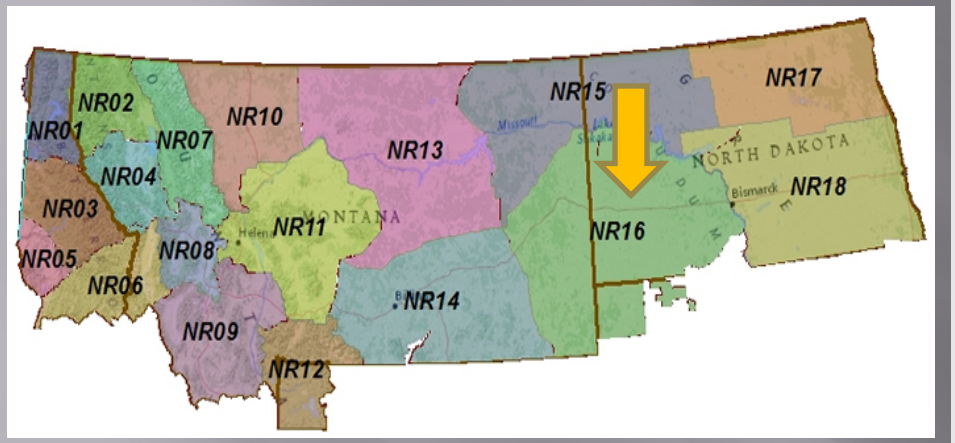
Crosby
Watford City





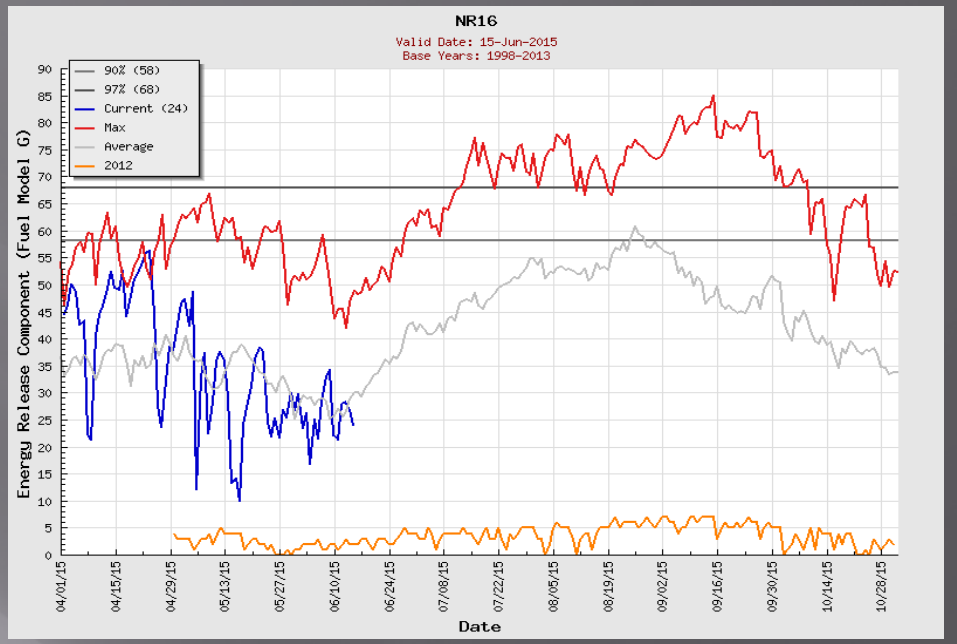


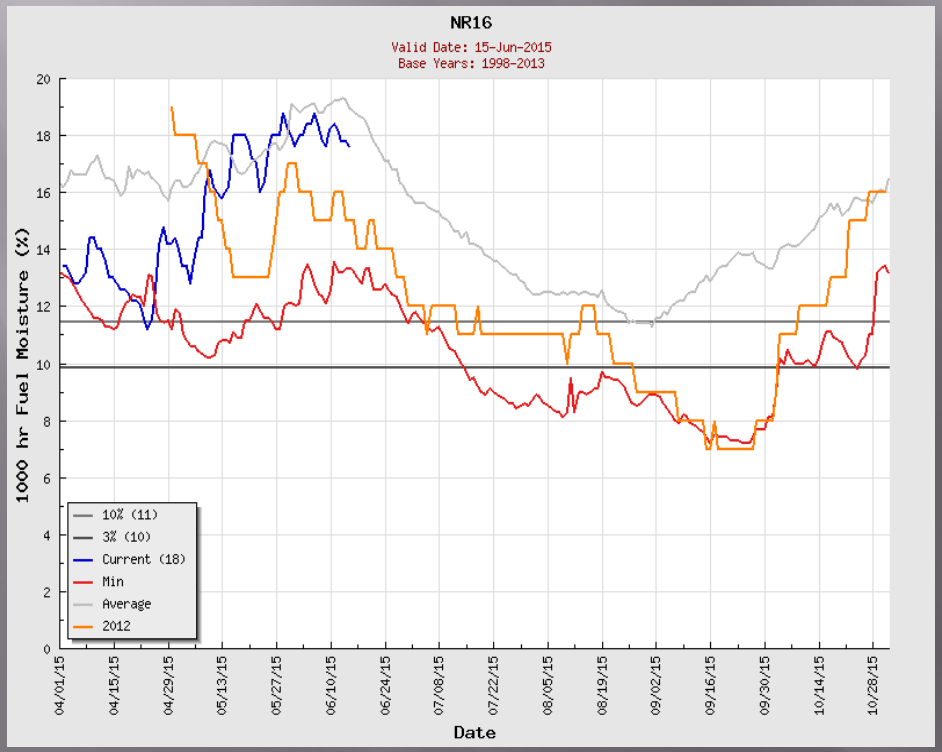
NR16 – Southeastern Montana/Southwestern South Dakota

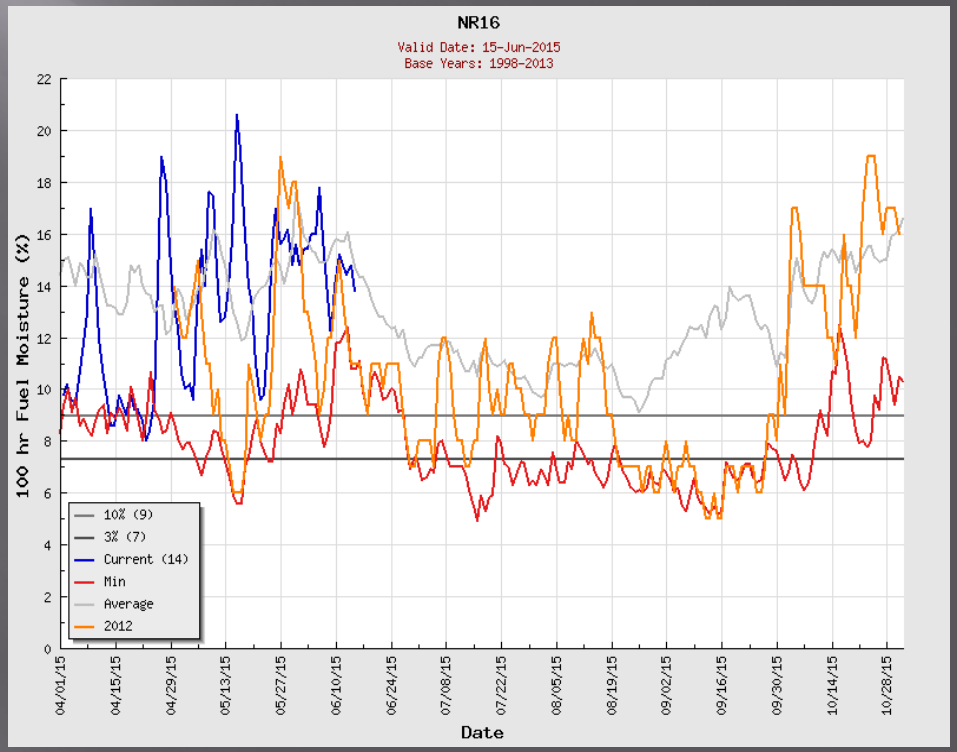


Big Sheep Mountain
Cannonball Creek

Knowlton
Sand Creek








QUIK SHADE
Let's Keep Montana's
Big Sky Clear Of
PREVENT
SMOKEY
FIRE DANGER
TODAY
WHAT'S IN
YOUR HOUSE?
KNOW WHAT YOU
HAVE TO LOSE
IN A WILDFIRE.
CREATE A HOME
INVENTORY AT:
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MONTANA
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DNRC


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NRCC
Northern Rockies Coordination Center

Mobilizing Incident Resources ...throughout Montana, North Dakota, Northern Idaho, a small portion of Northwestern South Dakota and Yellowstone National Park

Wednesday, May 22, 2013

INCIDENT INFORMATION

PREDICTIVE SERVICES
- Intelligence
- Weather
- Fuels/Fire Danger
- Outlooks

LOGISTICS / DISPATCH
- Dispatch Operations
- Aviation
- Crews
- Equipment/Supplies
- Overhead

ADMINISTRATIVE
- Northern Rockies Coordinating Group
- Policy and Reports
- Incident Business Management
- Safety Management
- Software Applications
- Training

RELATED LINKS
- National
- Area

Welcome to the NORTHERN ROCKIES COORDINATION CENTER

The **Northern Rockies Coordination Center (NRCC)** is the interagency focal point for coordinating the mobilization of resources for wildland fire and other all-hazard incidents throughout the Northern Rockies Area and, when necessary, for assignment throughout the United States. Located in Missoula, Montana, the Center also provides Intelligence and Predictive Services related products for use by the wildland fire community for purposes of wildland fire and incident management decision-making.

There are five primary components to the NRCC website.

- Incident Information provides general information on large wildland fires, fire restrictions and closures, and other relevant activity throughout the Geographic Area.
- Predictive Services provides operational products and links to incident situation information, maps, resources, current fire weather conditions, forecasts, fuels, fire behavior as well as daily, weekly and monthly fire weather/fire danger outlooks.
- Logistics/Dispatch provides detailed operation and information links for aviation, crews, equipment and overhead, including Incident Management Teams.
- Administrative provides fire and incident management tools and links including policies and reports, business management, safety, software applications, and training.
- Related Links component provides links to related Internet websites within the Northern Rockies Area and nationally.

BULLETIN BOARD

SITUATION

PREPAREDNESS LEVELS
Northern Rockies PL: 1
National PL: 1

Situation Reports

Year-to-Date & Historical Wildfire Data

••• Restrictions & Closures •••

SAFETY ALERTS

NRGA Landscape Mortality Safety Alert
NRGA Landscape Mortality Pocket Card

Coal Seam Fires Safety

COOPERATING FEDERAL, STATE AND OTHER AGENCIES IN THE NORTHERN ROCKIES AREA

Montana Drought and Water Supply

Status change from May to June 2015 – Assessed 6/10/2015

(All changes one category unless otherwise noted)

Drier

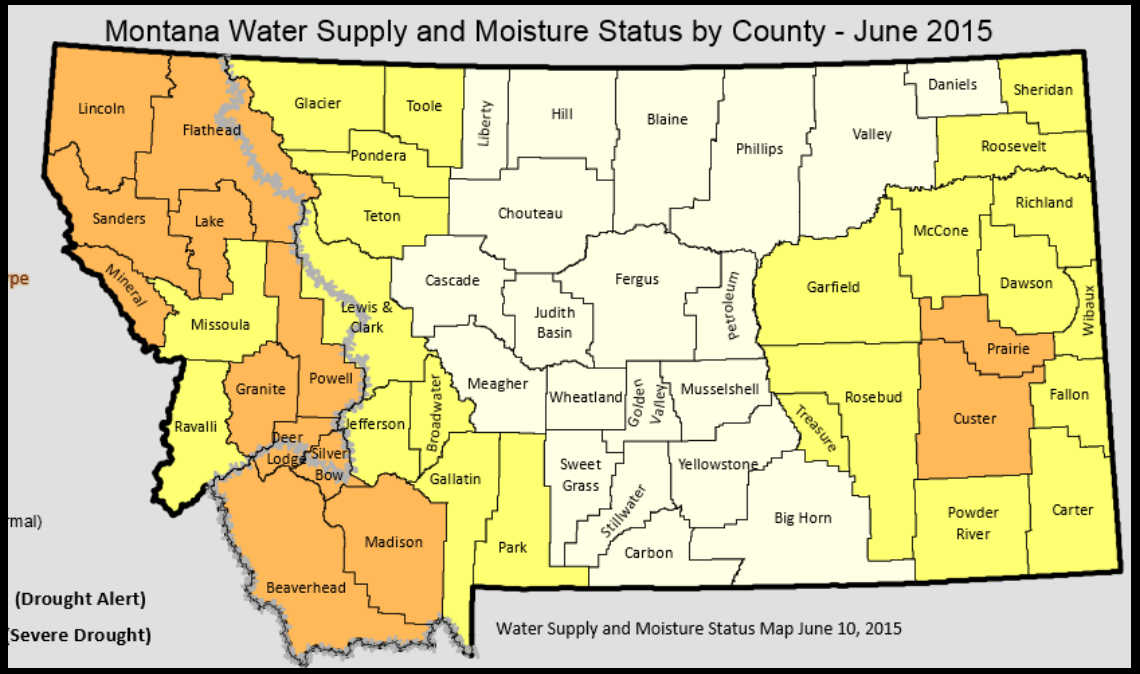
Lincoln
Flathead (2)
Sanders
Lake (2)
Mineral
Missoula
Powell (2)
Ravalli
Granite
Deer Lodge
Silver Bow
Cascade
Chouteau
Gallatin
Wheatland
Sweet Grass
Golden Valley
Stillwater
Carbon
Musselshell
Yellowstone
Big Horn
Rosebud
Phillips
Valley
Daniels

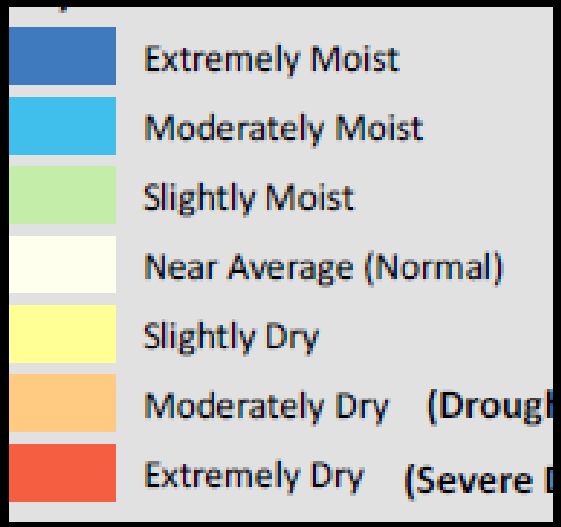
No Change

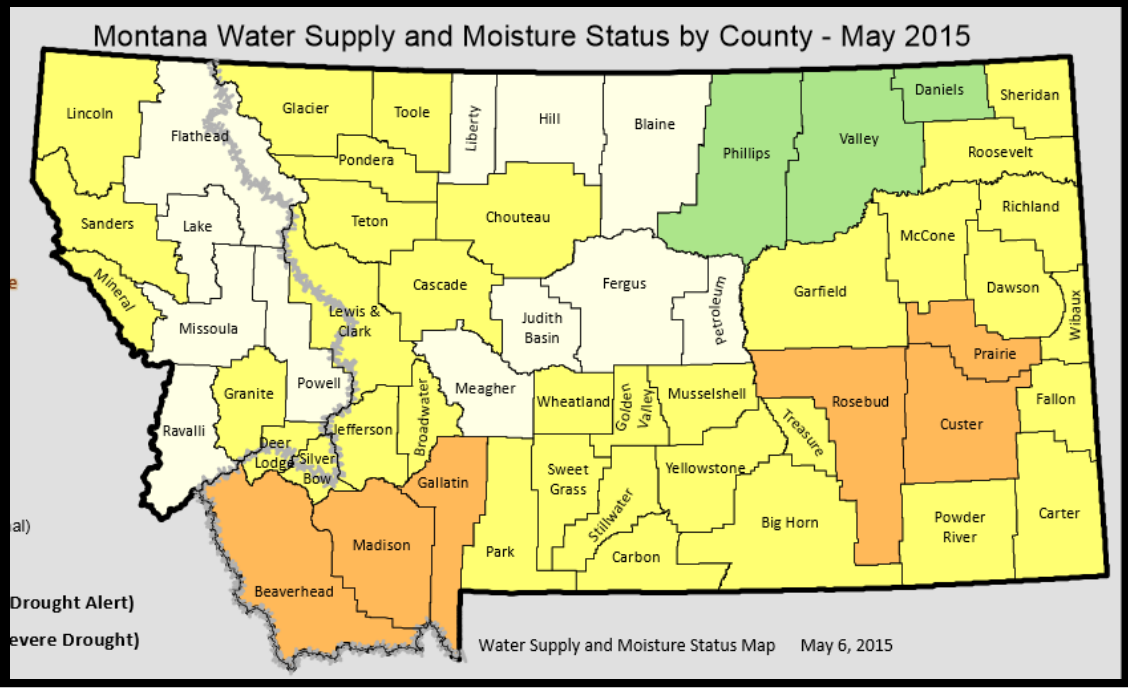
Glacier
Toole
Pondera
Teton
Lewis and Clark
Jefferson
Broadwater
Beaverhead
Madison
Liberty
Hill
Blaine
Meagher
Judith Basin
Fergus
Petroleum
Park
Garfield
Treasure
Fallon
Powder River
Carter
Custer
Prairie
McCone
Dawson
Wibaux
Sheridan
Richland
Roosevelt

Montana Drought Status

June 2015 vs. May 2015







Montana Drought & Water Supply Advisory Committee

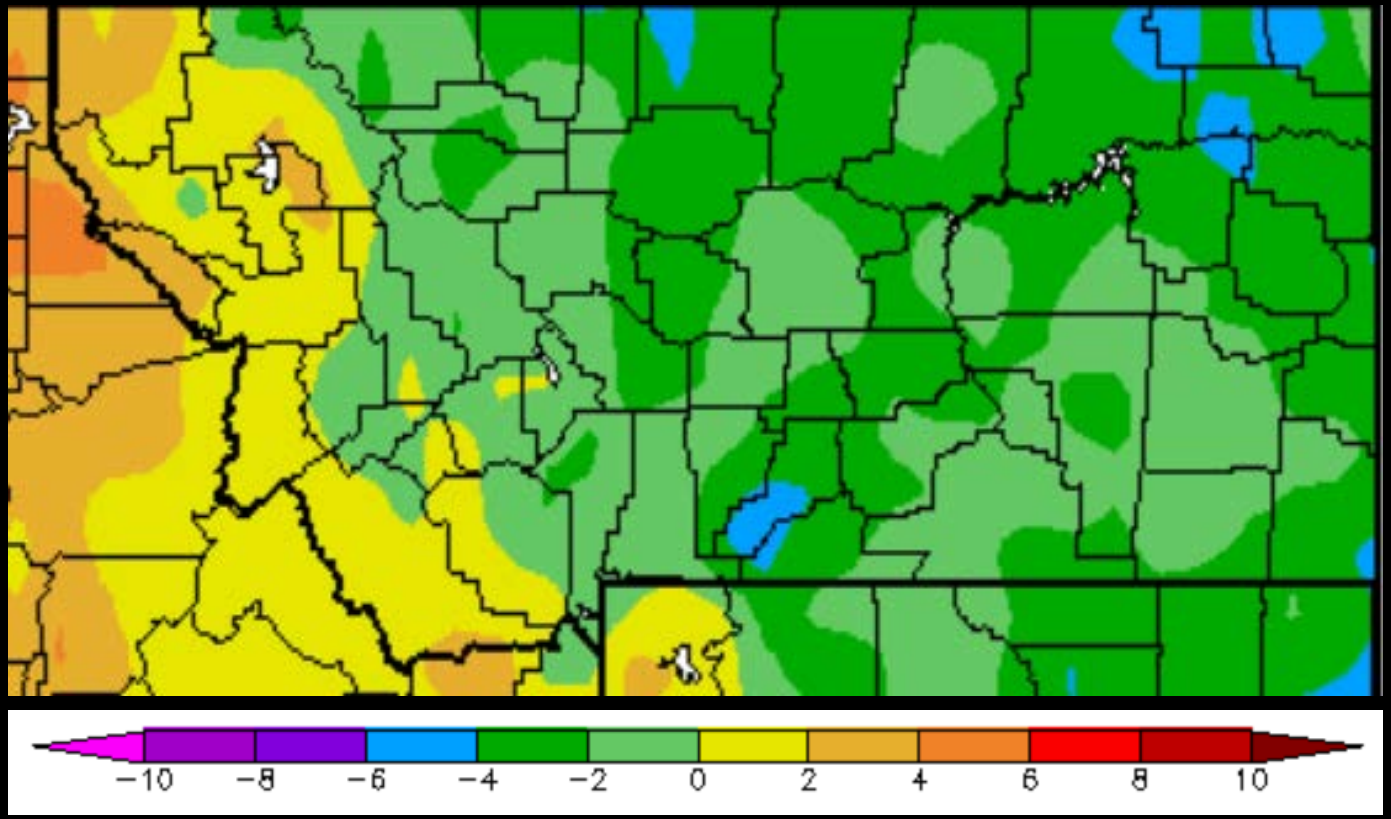
June 18, 2015

National Weather Service

Gina Loss – Service Hydrologist

Departure from Average Temperature

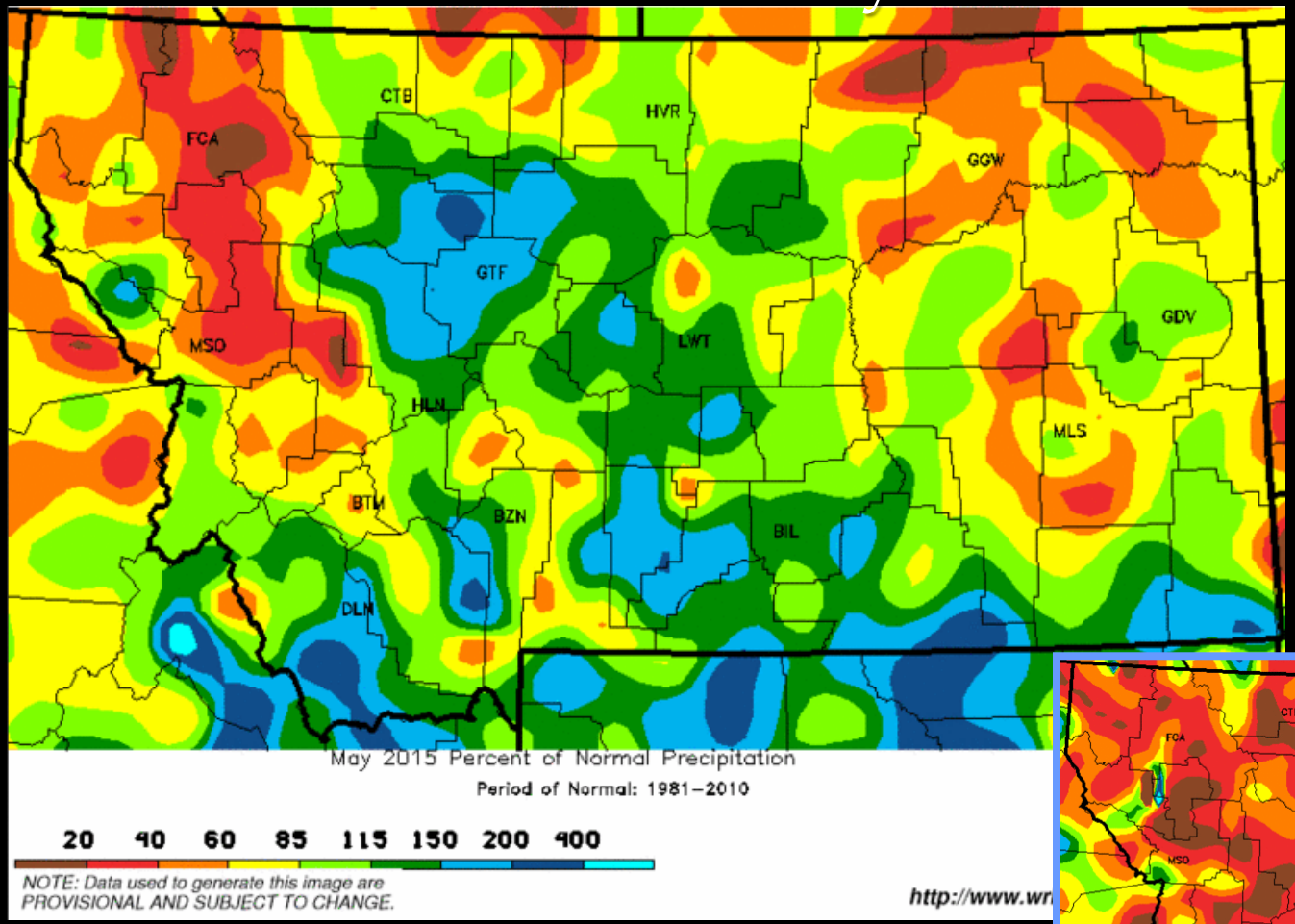
May 2015



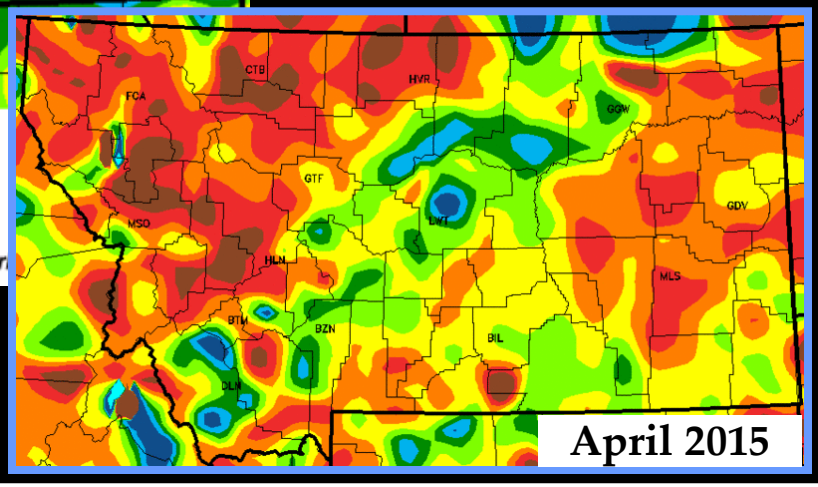
- West and southwest… near to above average
- Central and east… near to below average

Percent of Normal Precipitation

May 2015

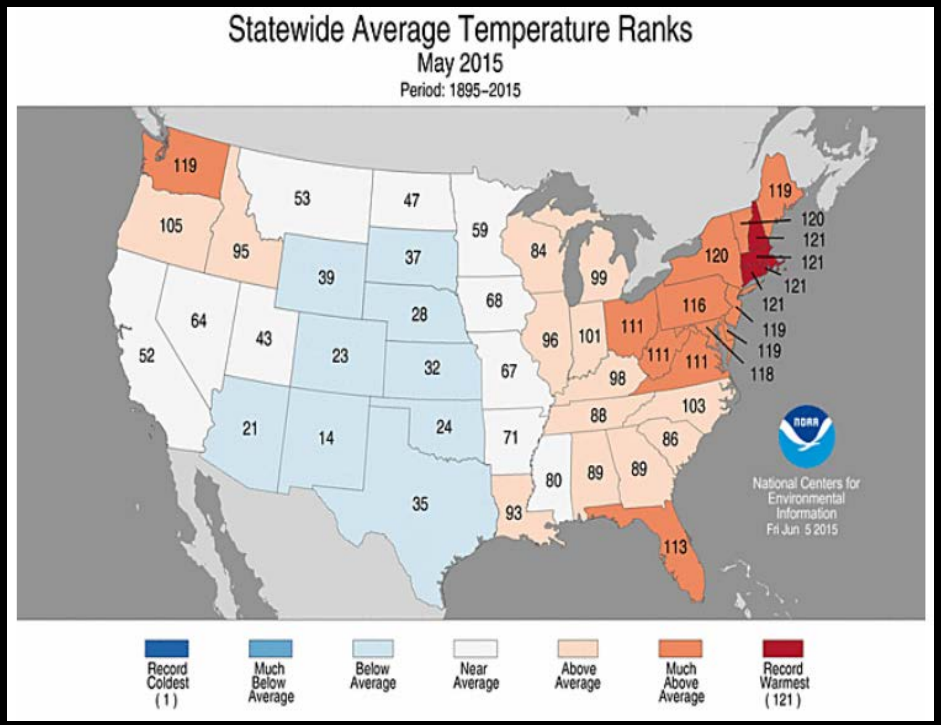


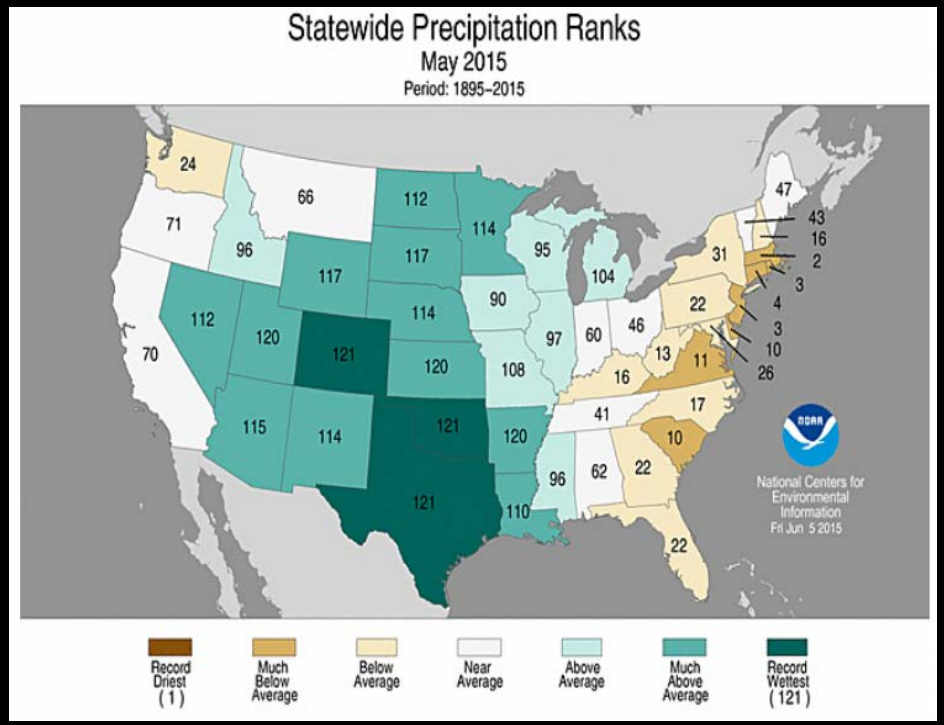
- West… below to well below average
- North-central, northeast and east… below to well below average
- Central and south… near to well above average
- Kalispell – Driest May on record



May Rankings

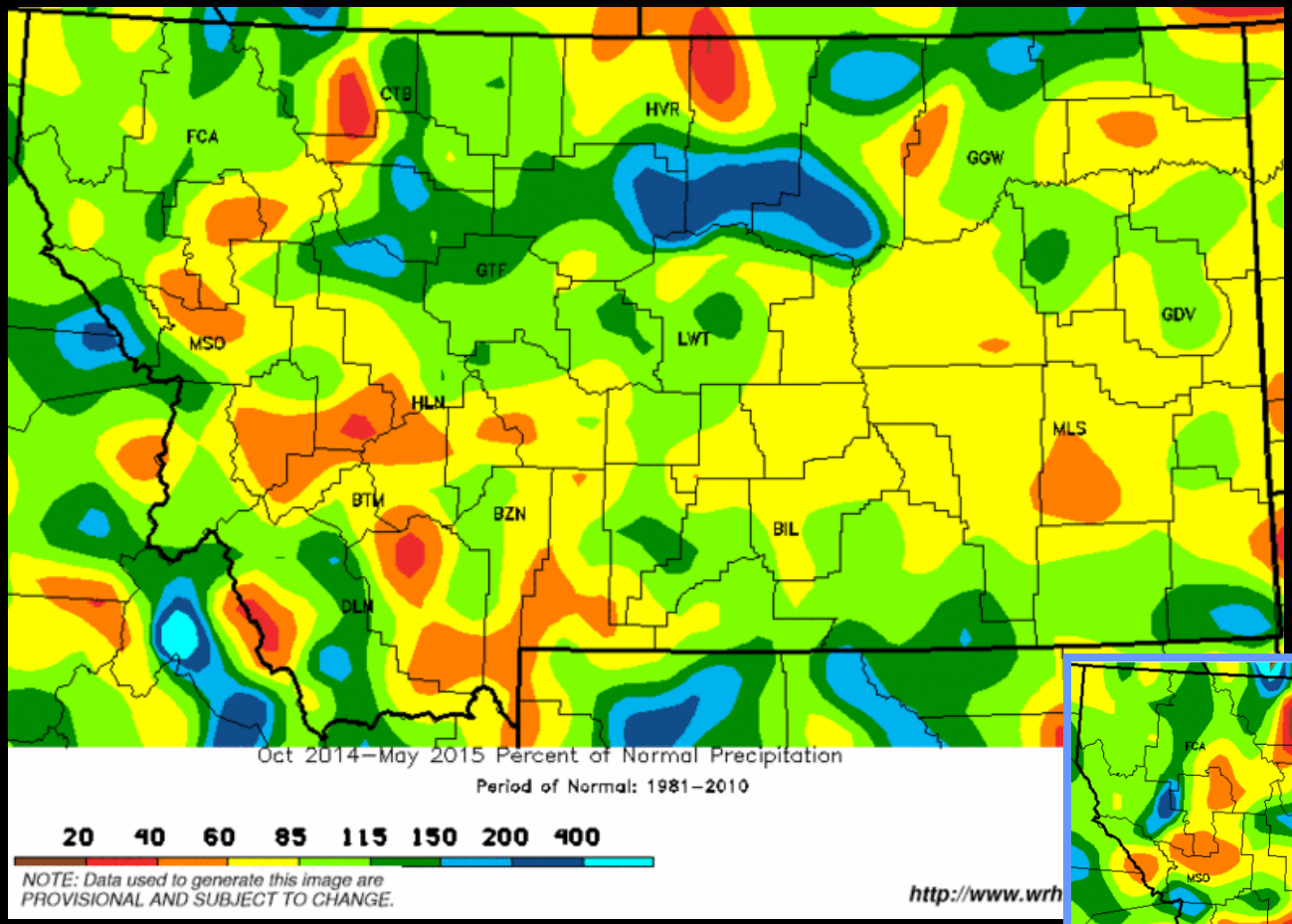
53th coolest, 66th driest



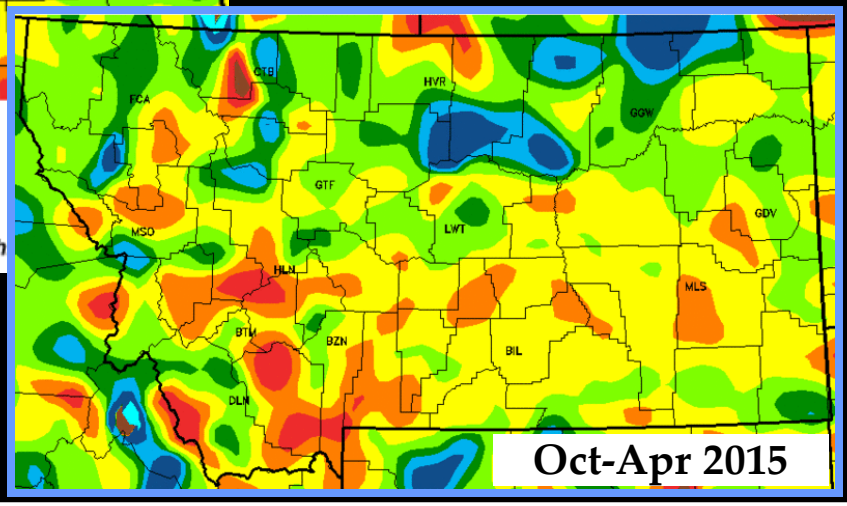


Percent of Normal Precipitation

Water Year 2015

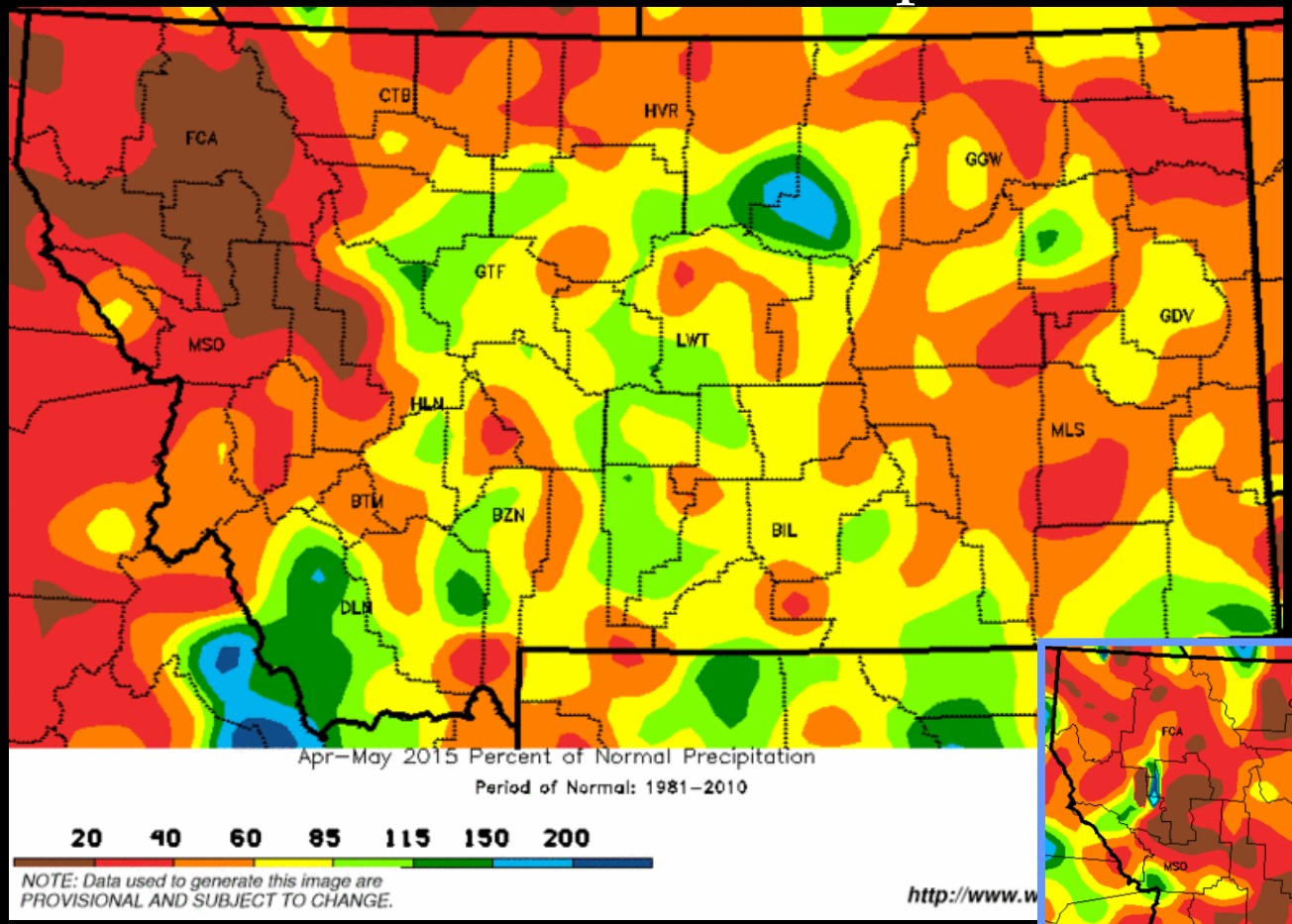


- October - May
- Mostly near to below average
- Areas west, southwest, north-central and east… well below average
- Areas central… well above average
- Miles City –11th driest of 138 years of record

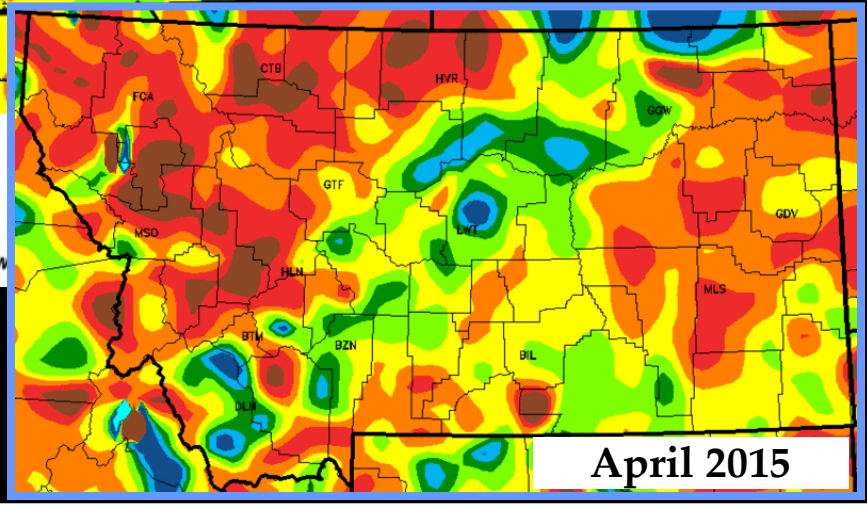


Percent of Normal Precipitation

Crop Year

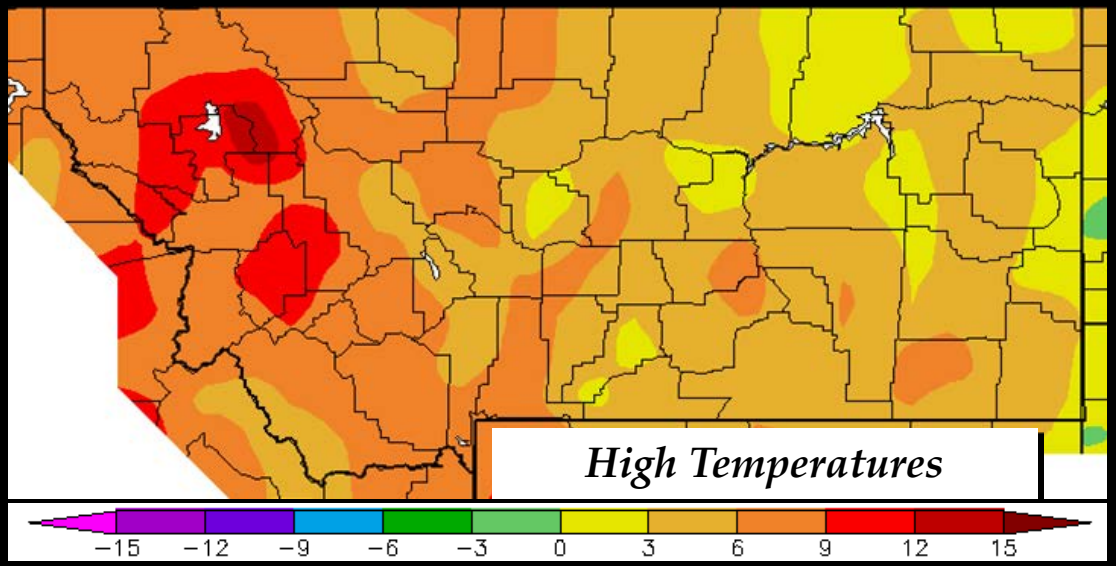


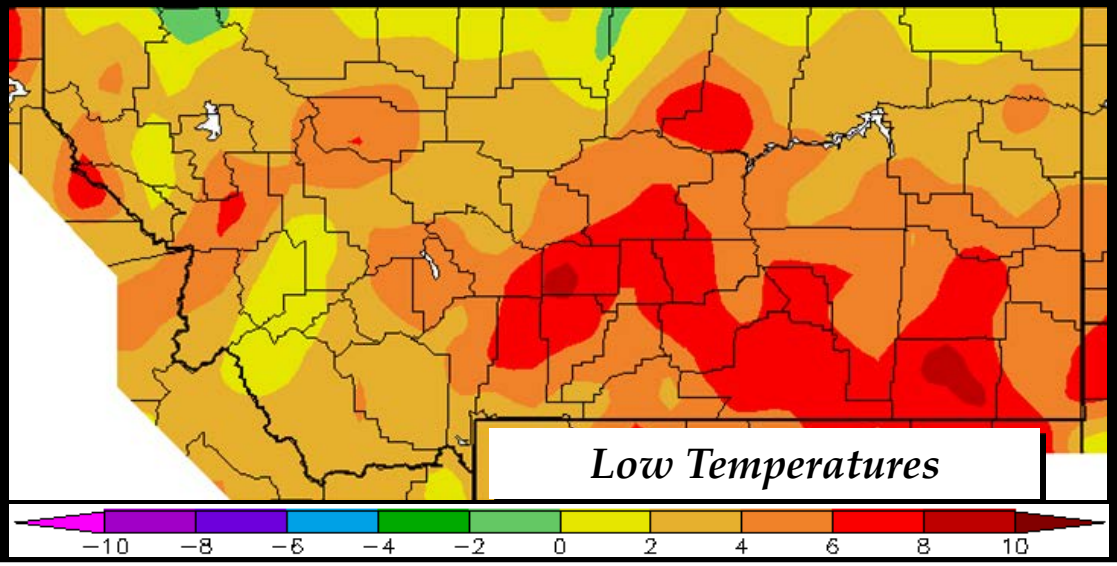
- April - May
- West, north, and east… large areas well below average
- Central and south-central… near to below average
- Only isolated areas above to well above average



Temperature Anomalies

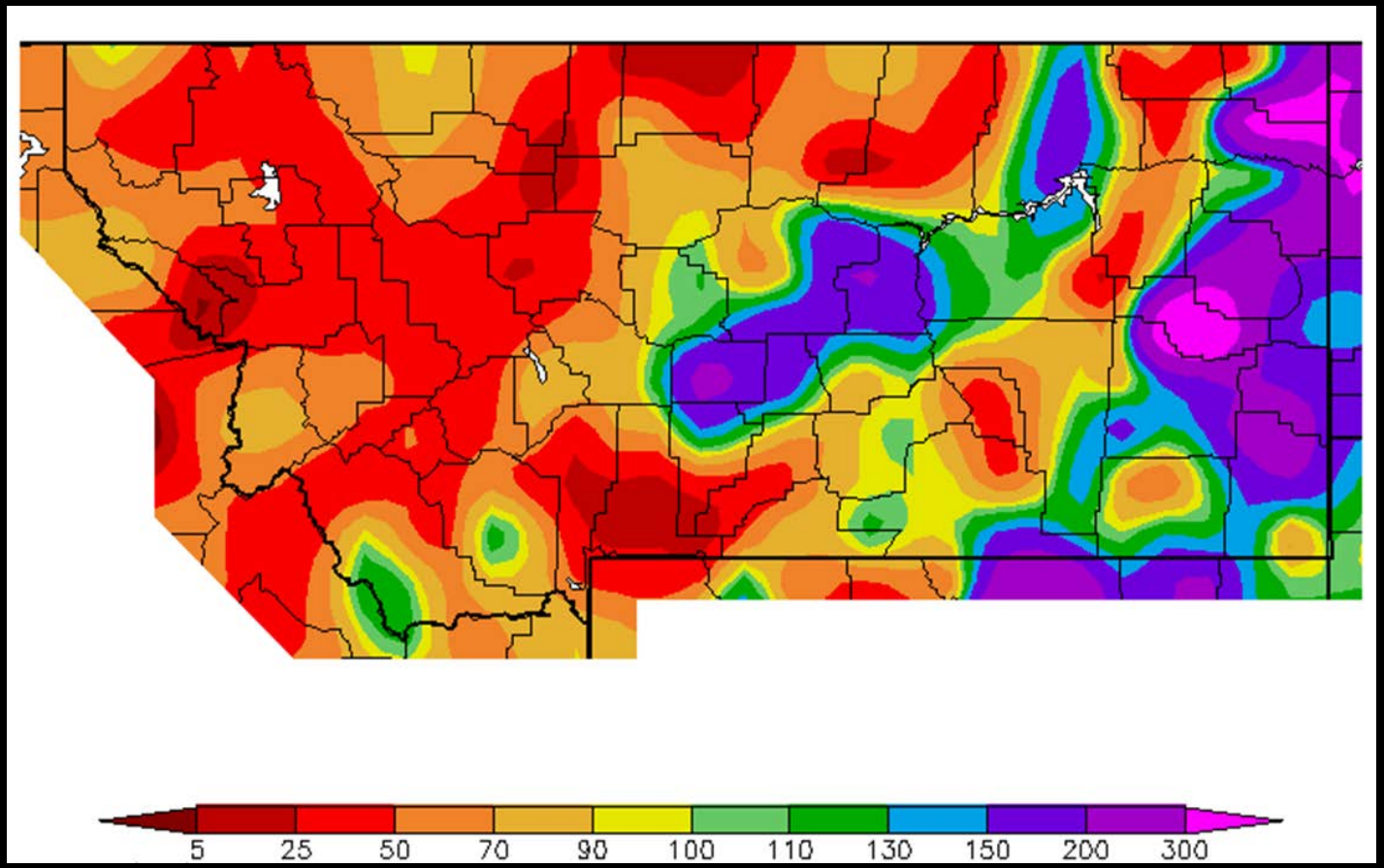
June 1 - 15





- Highs
  - Widespread 3-9 °F above average
  - Isolated areas west 9-15 °F above average
- Lows
  - Mostly near to 6 °F above average
  - South-central to southeast 6-10 °F above average

Percent of Average Precipitation
June 1 - 16



- Well below average west, north central and portions of south-central and east
- Above average central and east

Flooding in Eastern Montana

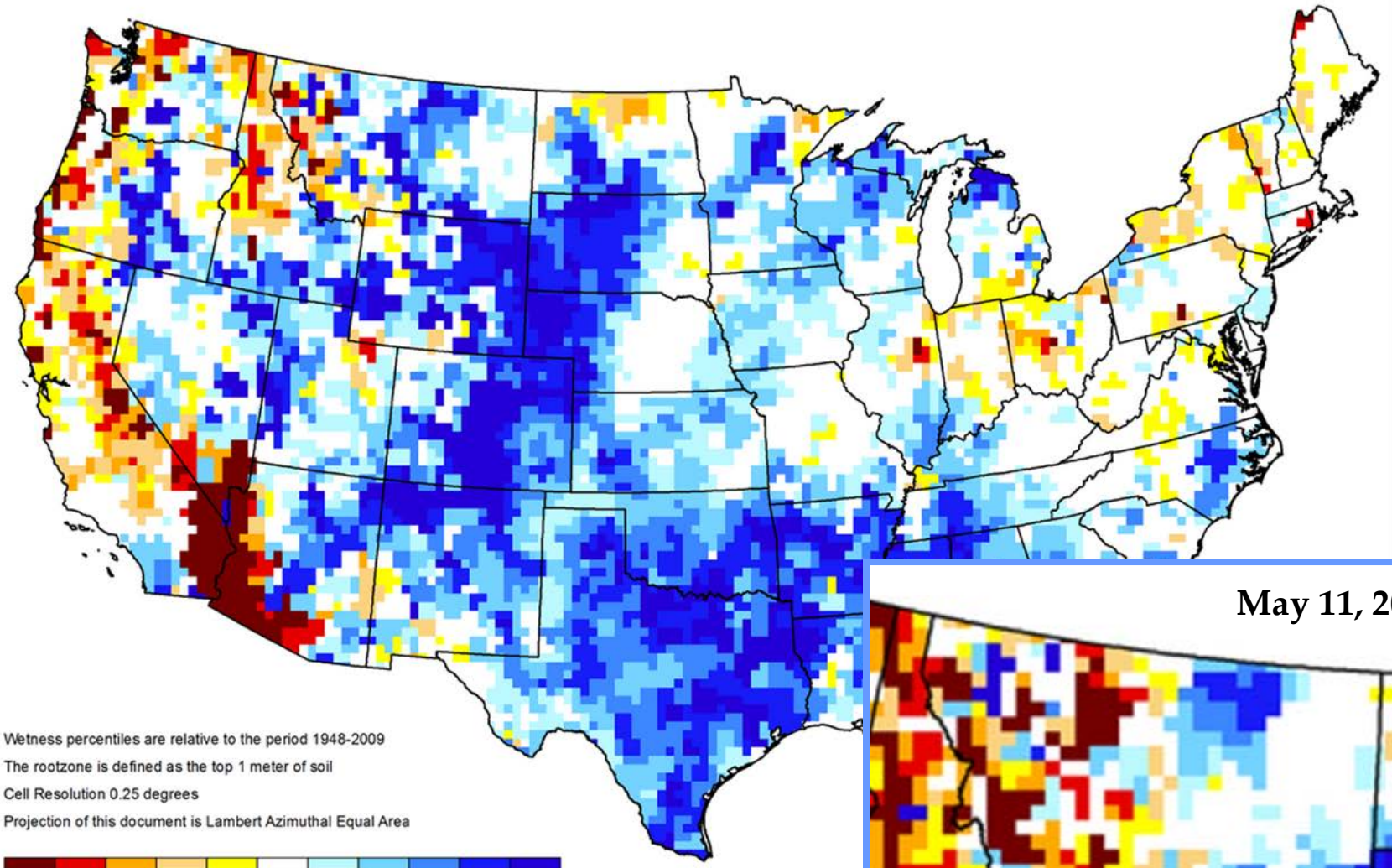
June 2 – Flash Flooding from thunderstorms in Sidney, Montana
Photo: Deb Gilbert, Richland DES Coordinator

- Several Flood Warnings and Flash Flood Warnings were issued for areas from Sidney into south-central and southeast Montana

June 10 - Road is flooded north of Shepherd after a storm dumped up to three inches of rain in the area.
Photo: Jeff Branson - Billings Gazette

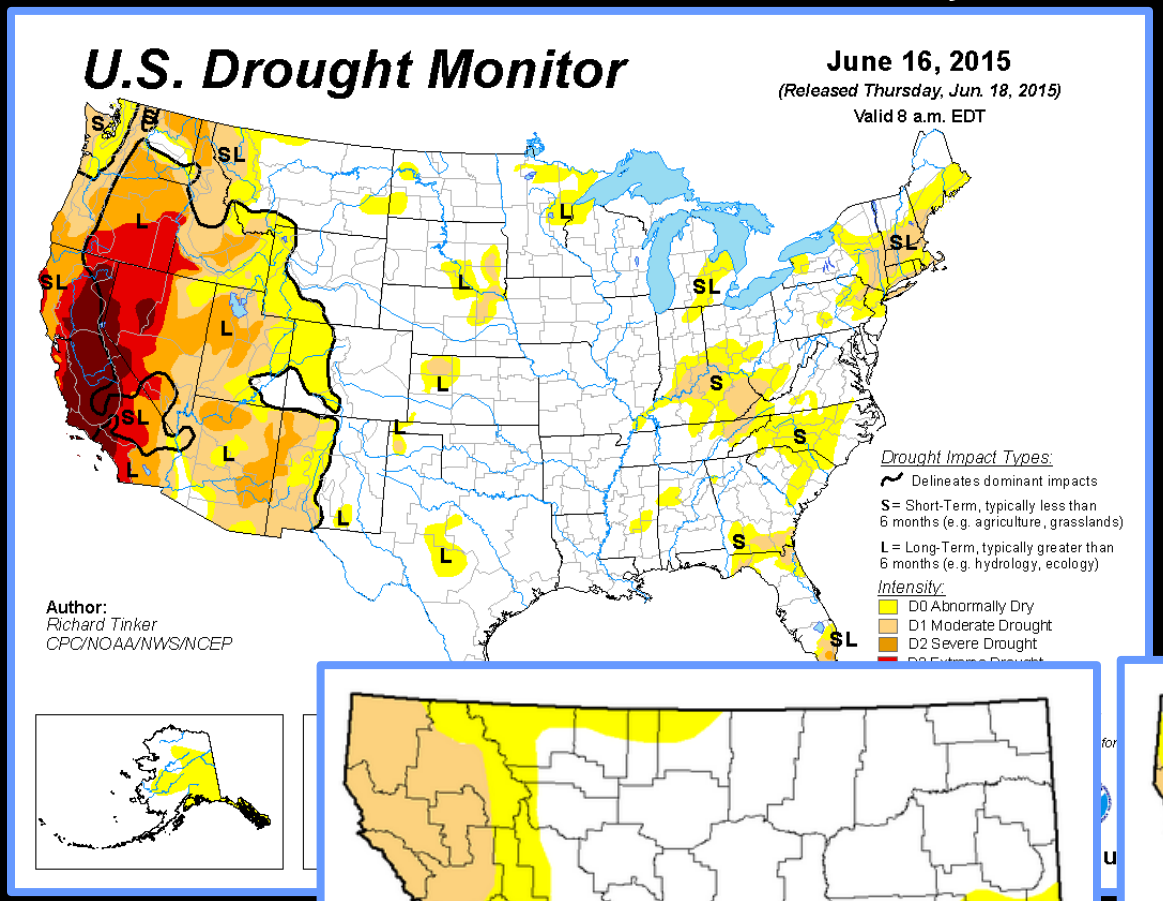
GRACE-Based Root Zone Soil Moisture Drought Indicator

June 01, 2015

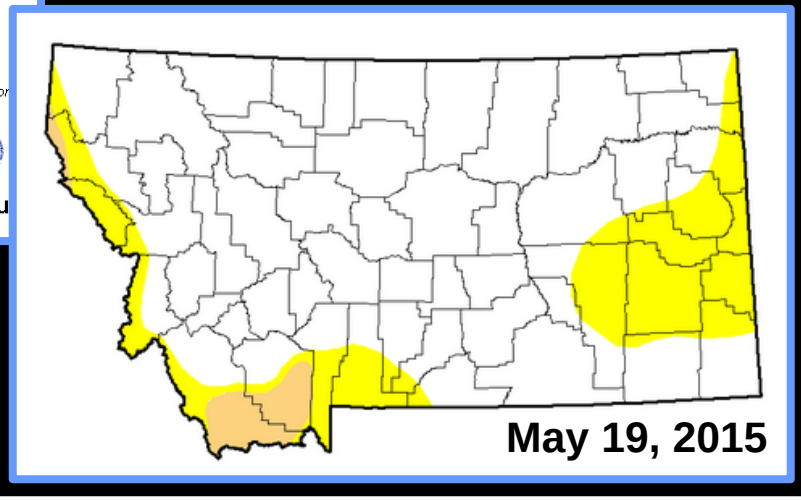


National Drought Monitor

Issued June 18



- D0 'Abnormally Dry' expanded across west southwest and small portion of hi-line
- D1 'Moderate Drought' continues in far southwest and introduced west of the divide
- D0 'Abnormally Dry' reduced over eastern Montana



North American Drought Monitor

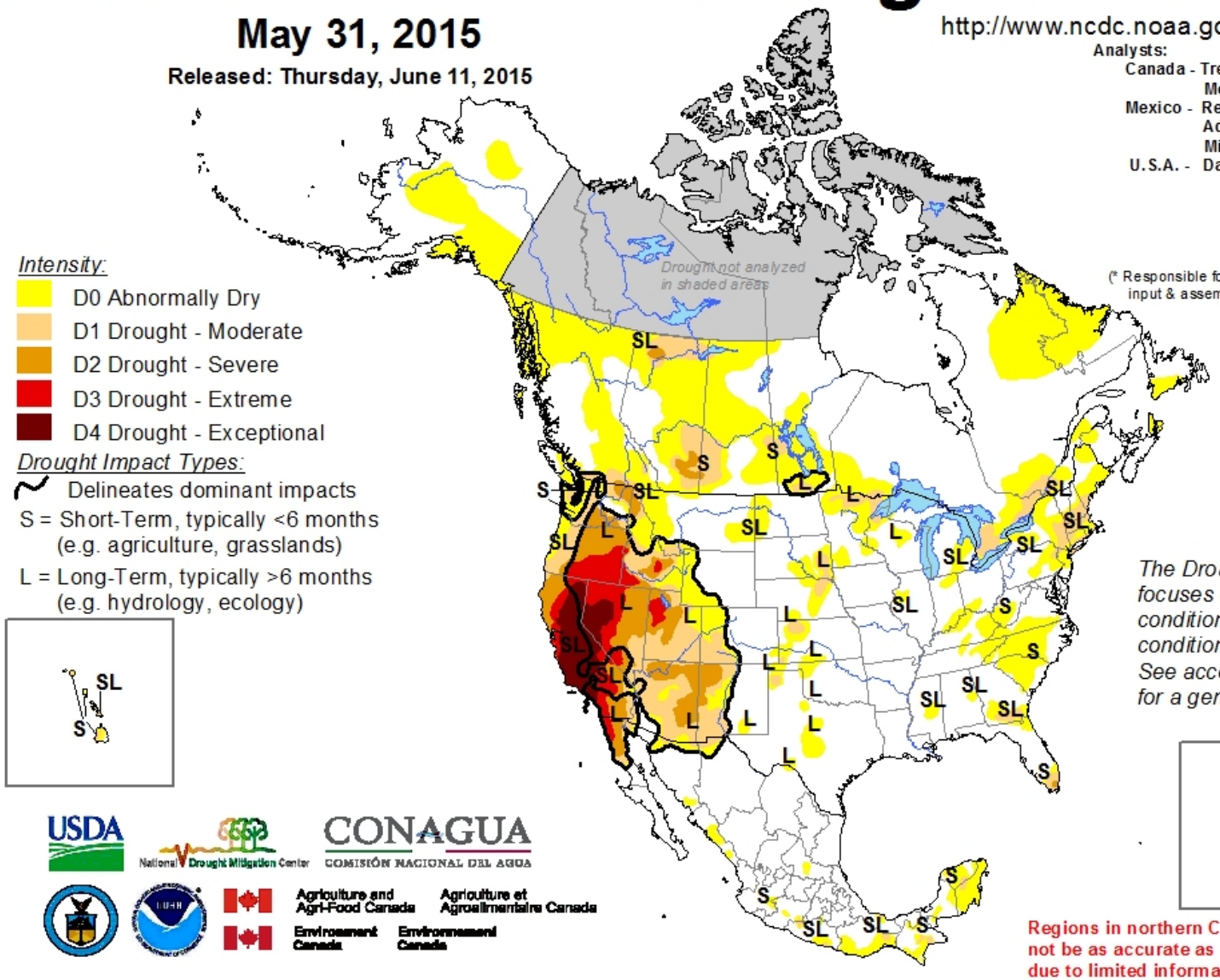
May 31, 2015

Released: Thursday, June 11, 2015

http://www.ncdc.noaa.gov/nadm.html

Analysts:
Canada - Trevor Hadwen
Monica Hadarits
Mexico - Reynaldo Pascual
Adelina Albanil
Minerva Lopez*
U.S.A. - David Miskus

(* Responsible for collecting analysts' input & assembling the NA-DM map)



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically <6 months (e.g. agriculture, grasslands)

L = Long-Term, typically >6 months (e.g. hydrology, ecology)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text for a general summary.

Regions in northern Canada may not be as accurate as other regions due to limited information.

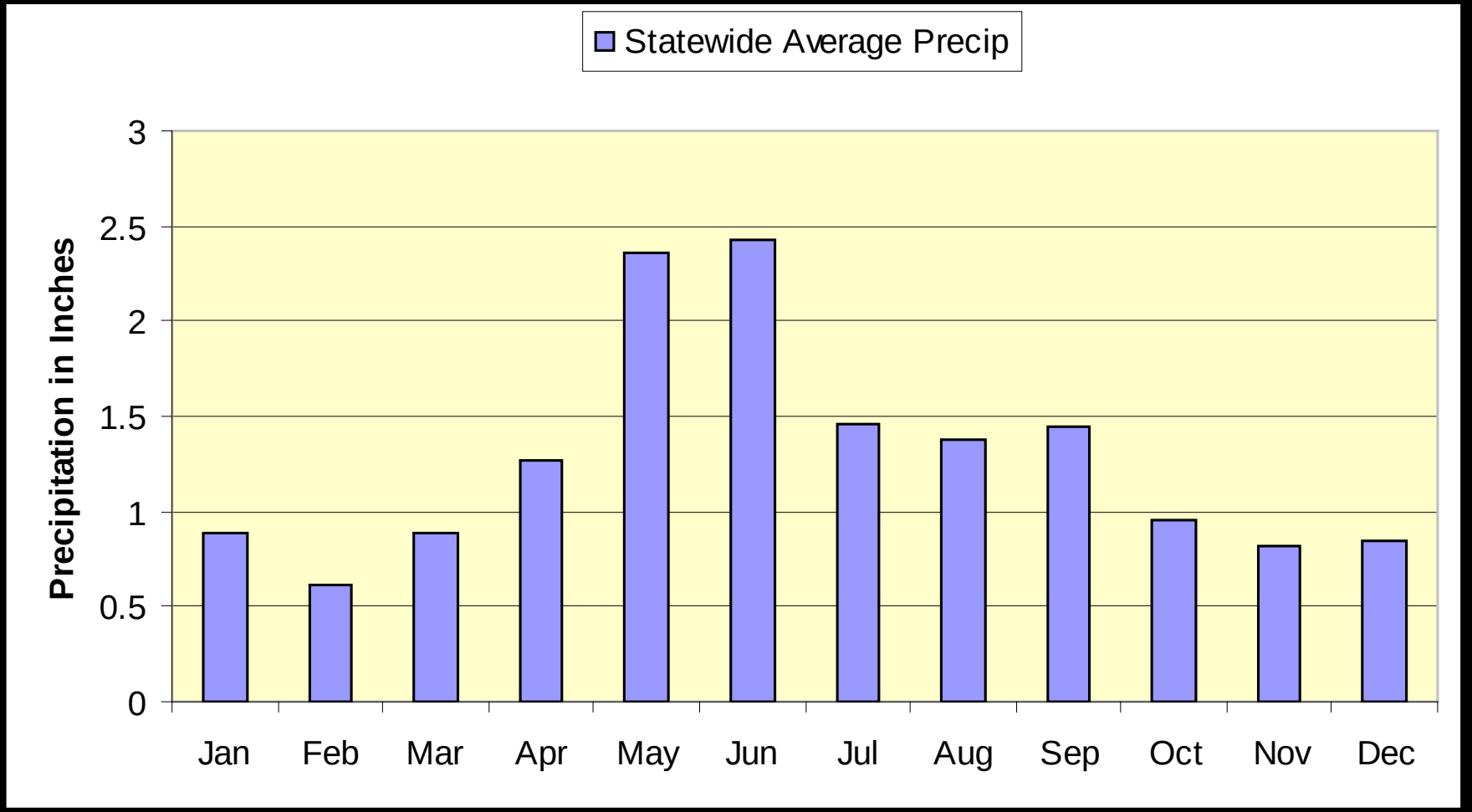
USDA | National Drought Mitigation Center | CONAGUA Comisión Nacional del Agua

Agriculture and Agri-Food Canada / Agriculture et Agroalimentaire Canada

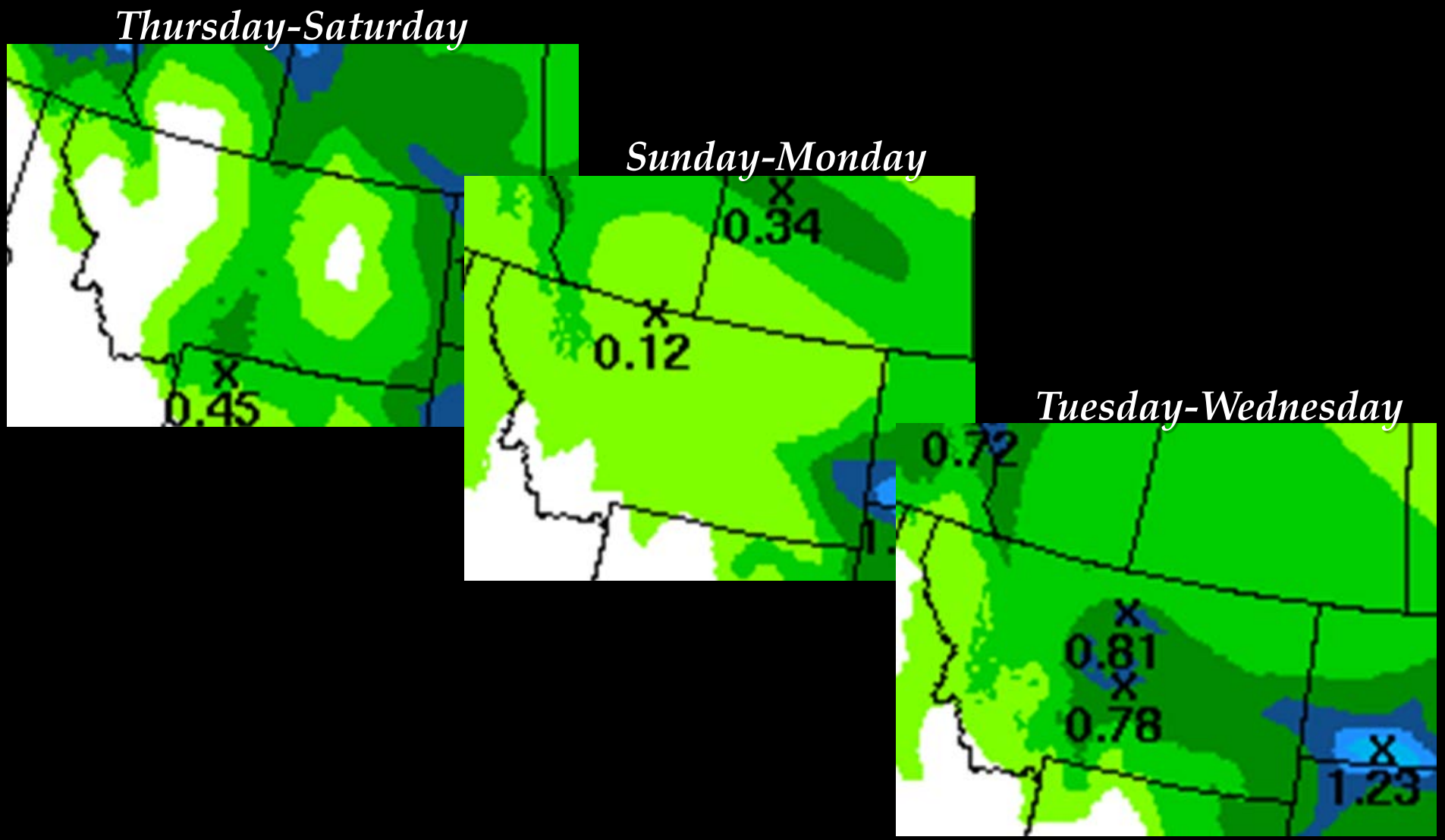
Environment Canada / Environnement Canada

Statewide Average Precipitation

June wettest month of year, July drops to nearly half of June

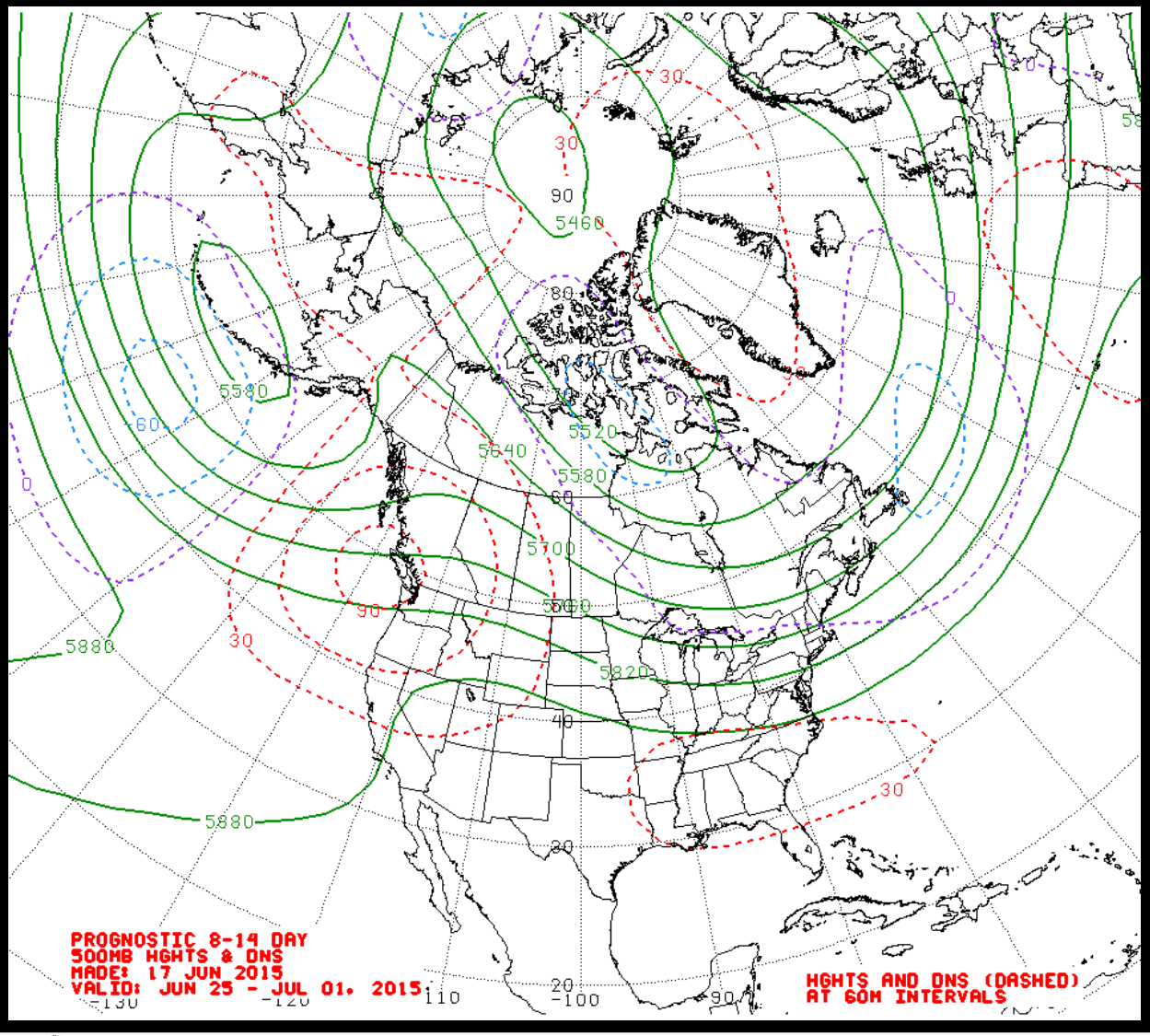


7-Day Precipitation Forecast



8 to 14 Day Outlook

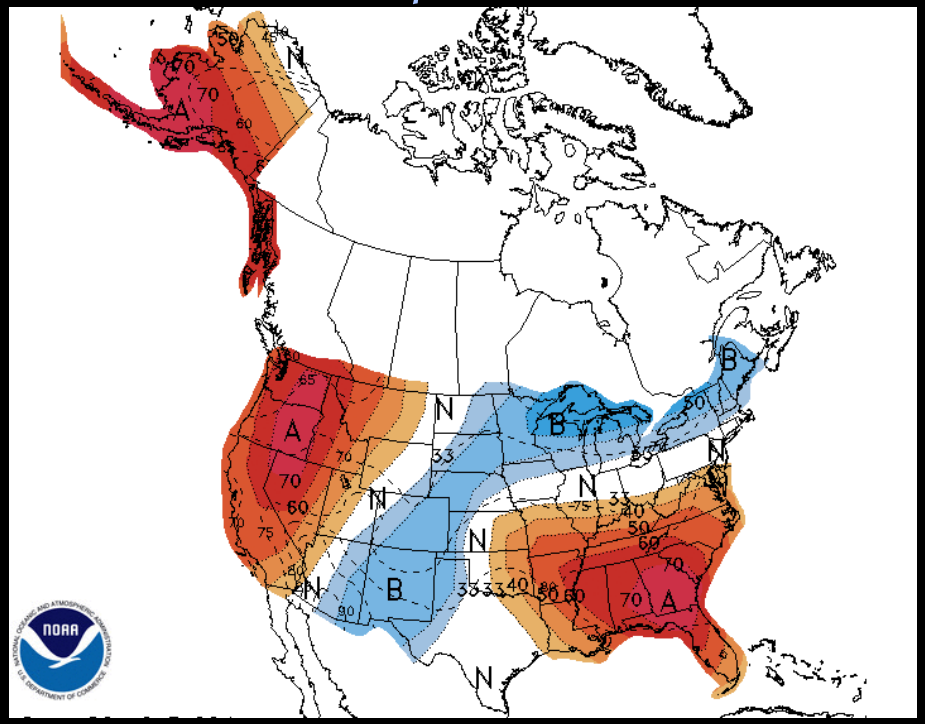
500mb Heights and Anomalies



- June 25 – July 1
- Subtle high pressure ridge over Pacific Northwest and Montana

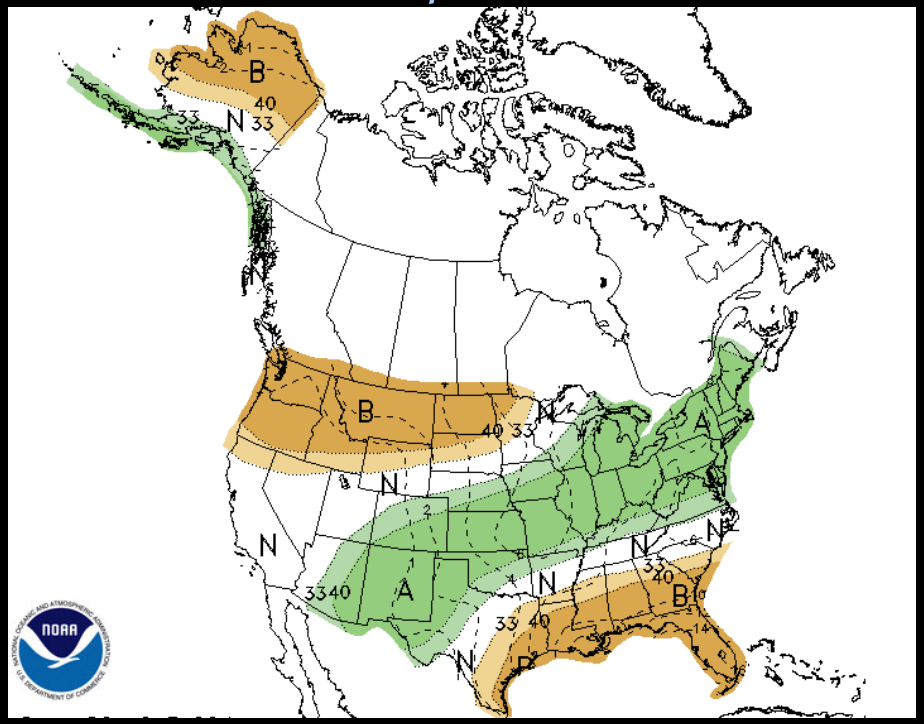
8 to 14 Day Outlook
June 25 – July 1

Temperature



- 33% to 70% chance temperatures will average above normal across all except far eastern Montana

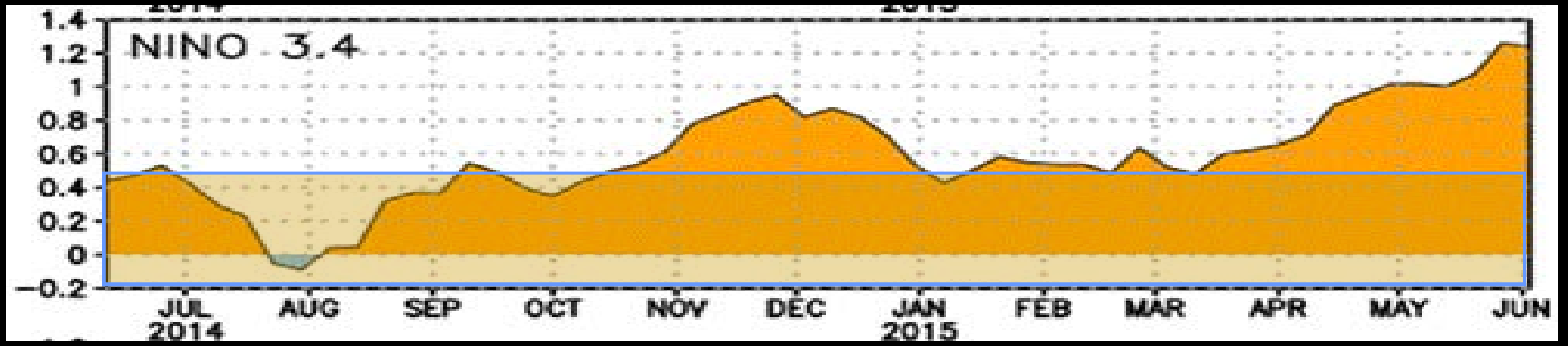
Precipitation

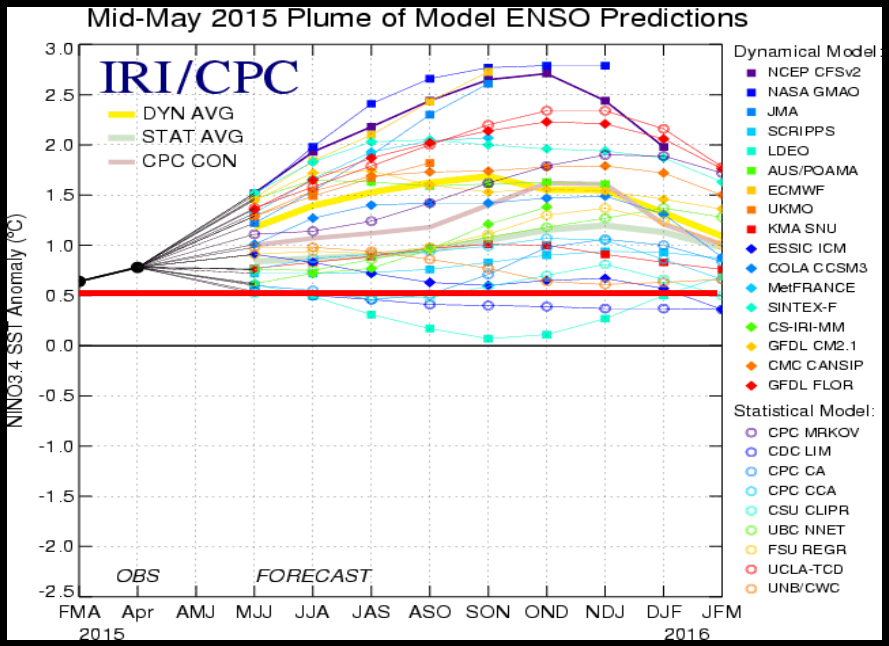


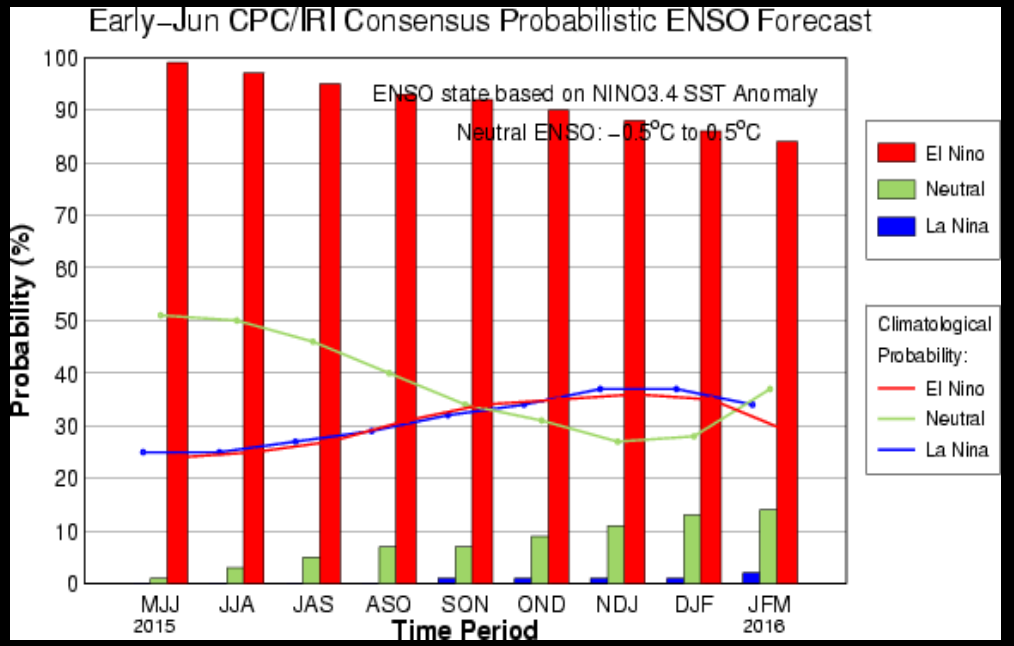
- 40% to 50% chance precipitation will average below normal statewide

El Niño / La Niña

El Niño Advisory - Likely El Niño will continue through winter 2016



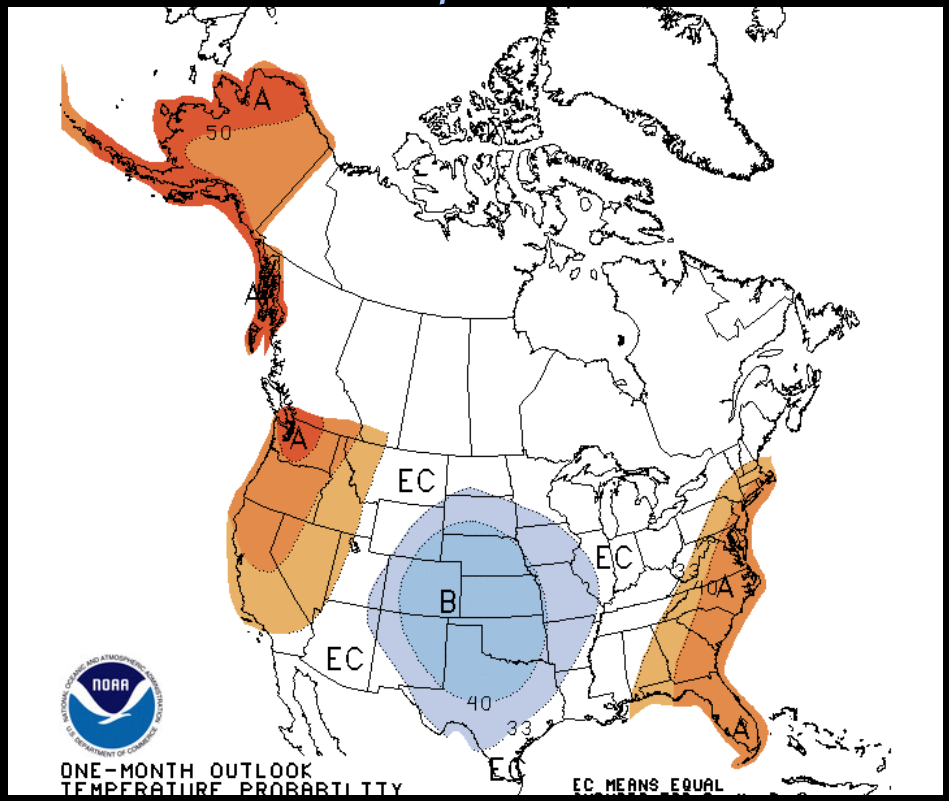




July Outlook

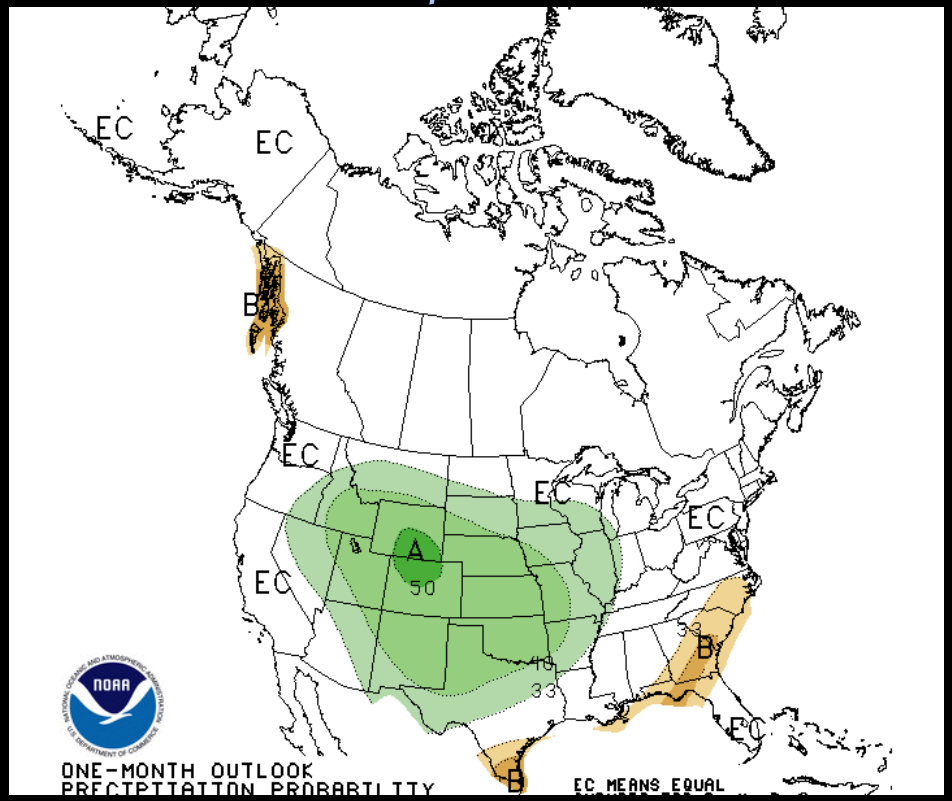
Updated June 18

Temperature



- 33% to 40% chance temperatures will average above normal west
- Equal chances for above, below or near normal central and east

Precipitation

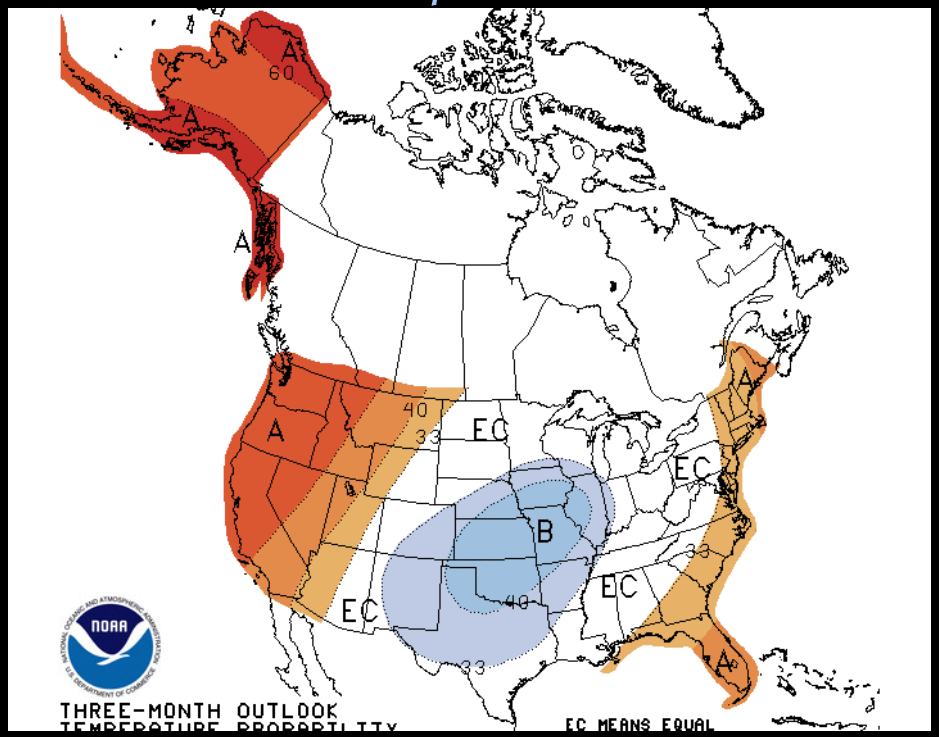


- 33% to 50% chance precipitation will be above average over southern half of Montana
- Equal chances for above, below or near normal north

August – October Outlook

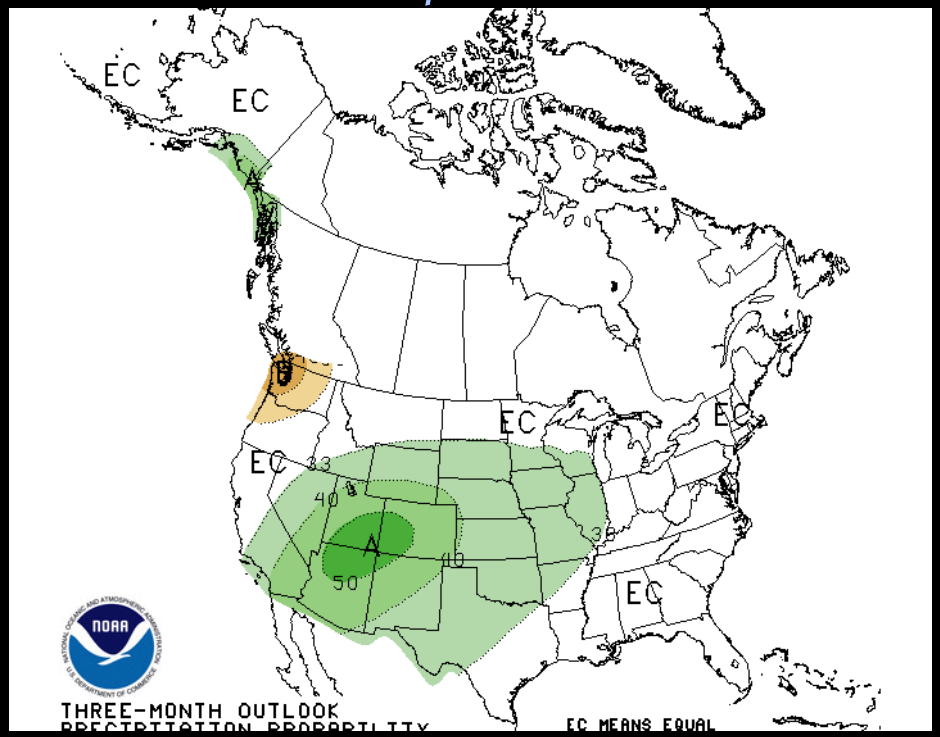
Updated June 18

Temperature



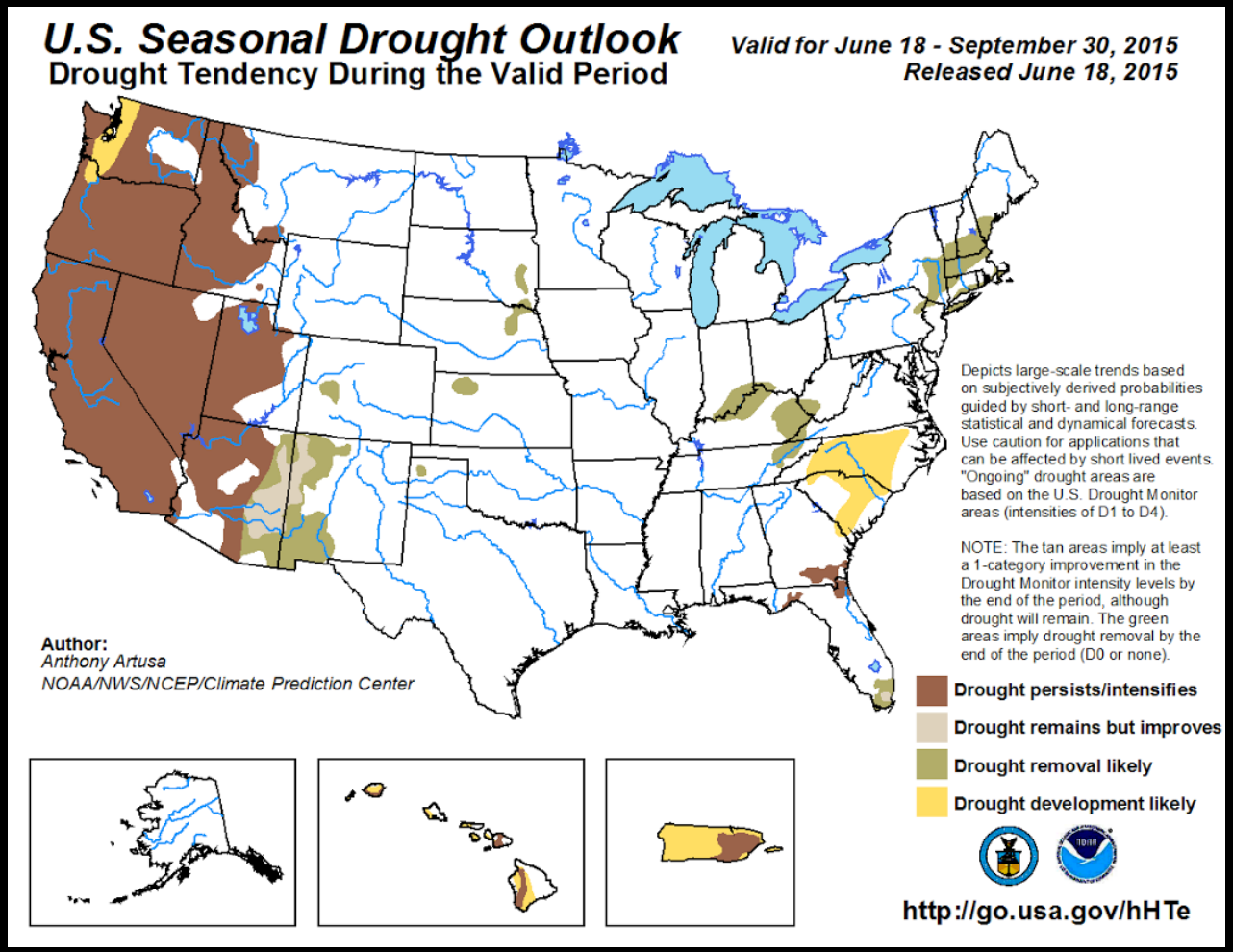
- 33% to 60% chance temperatures will average above normal over most of Montana

Precipitation



- 33% to 40% chance precipitation will average above normal across extreme southeast Montana
- Equal chances for above, below, or near average west, central, and north

Drought Outlook through September
Issued June 18



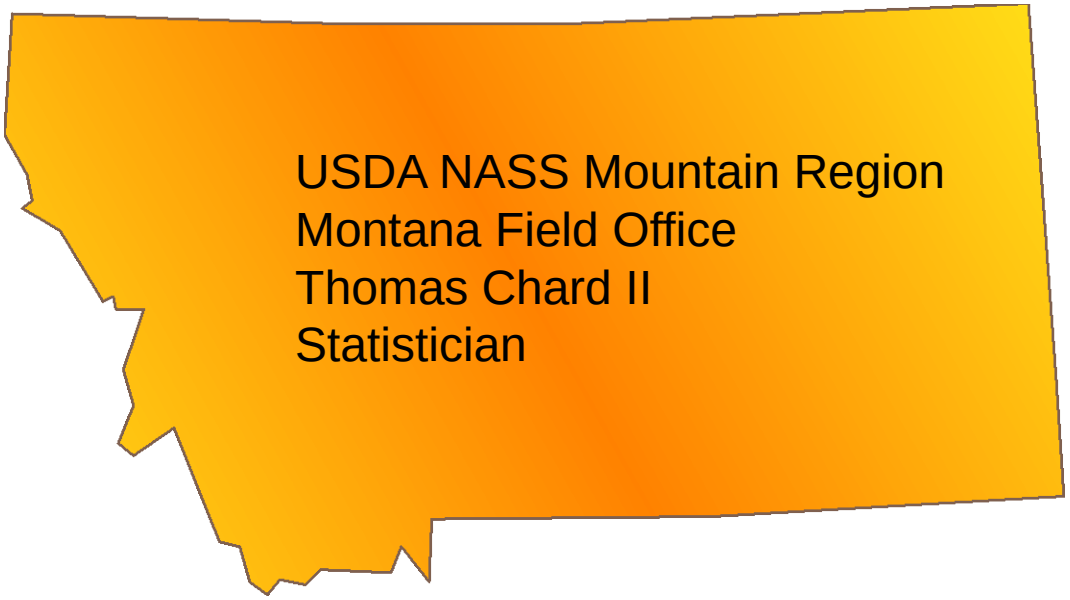
- Those areas currently in drought status (D1 – Moderate Drought) now expected to persist or intensify

In Summary...

- While May and early June brought some storms, overall precipitation is near to below normal.
  - Only isolated areas southwest, south-central , and southeast are averaging above normal
  - Montana Drought/Water Supply and National Drought Monitor reflecting these drier conditions
- Some flooding occurred east and southeast
  - Includes some flash flooding from thunderstorms
- Going into drier summer months
  - While some areas of state still in green-up, other areas are drying quickly
- El Niño continued to strengthened, and now likely it will persist through winter
- Drought Outlook currently showing those areas of drought currently in Montana expected to persist.
  - No indication of significant expansion.

Photo: Jeff Branson - Billings Gazette

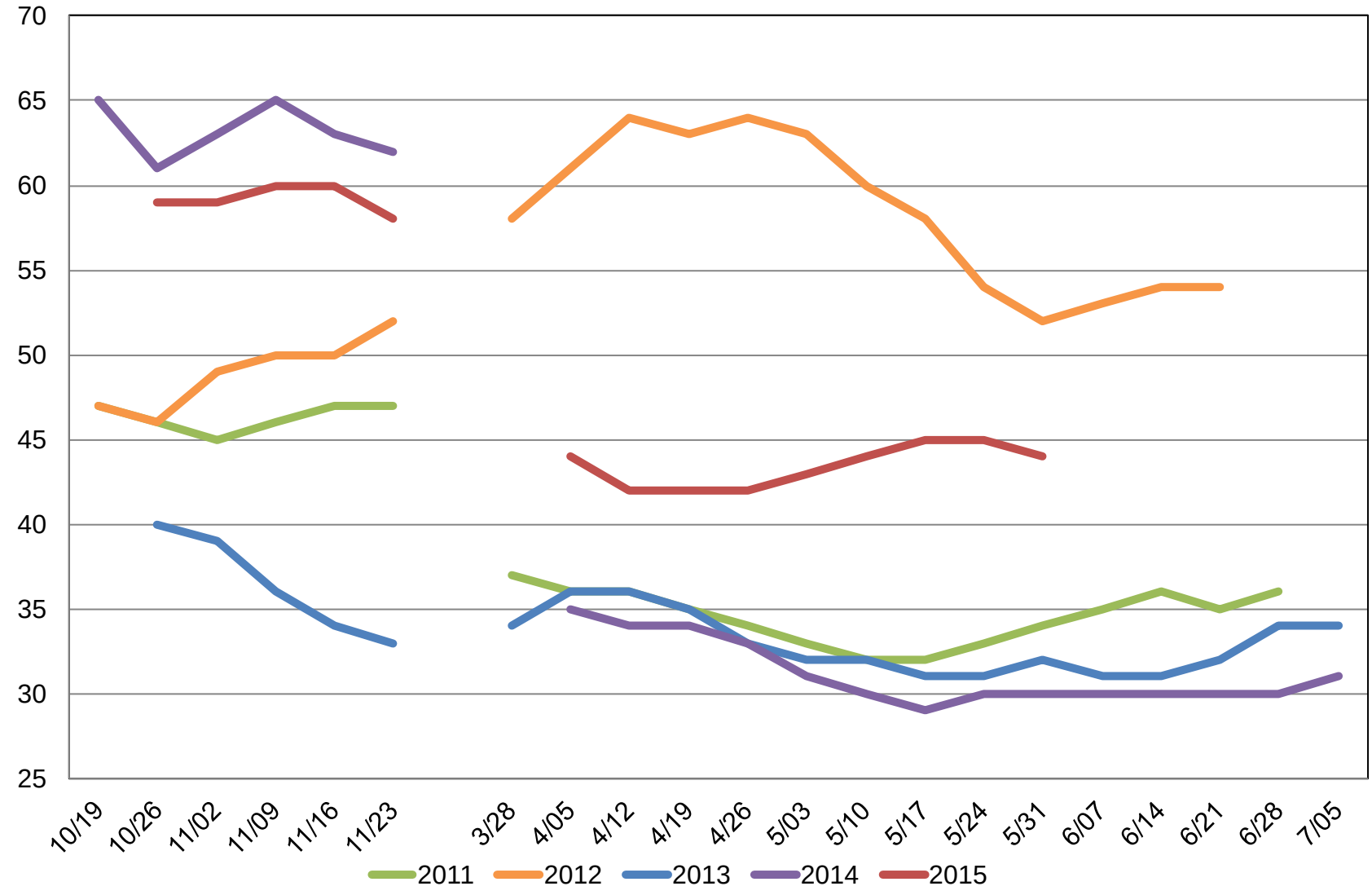
Governor’s Drought & Water Supply Advisory Committee



USDA NASS Mountain Region
Montana Field Office
Thomas Chard II
Statistician

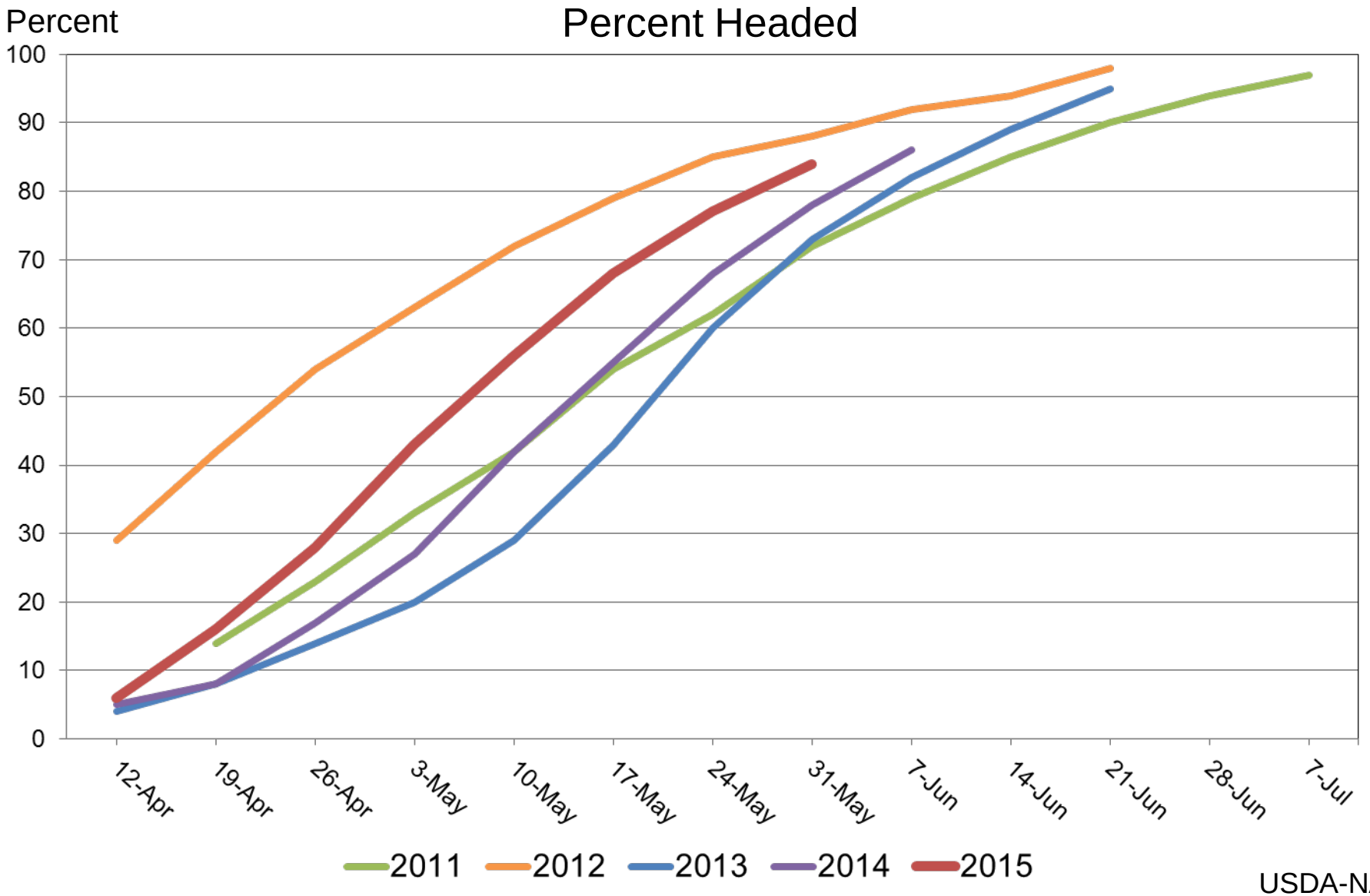
U.S. Winter Wheat Condition

Percent Rated Good to Excellent



USDA-NASS
6-10-15

U.S. Winter Wheat Progress



USDA-NASS
6-10-15

Montana Winter Wheat June 1 Production Forecast

Total Production

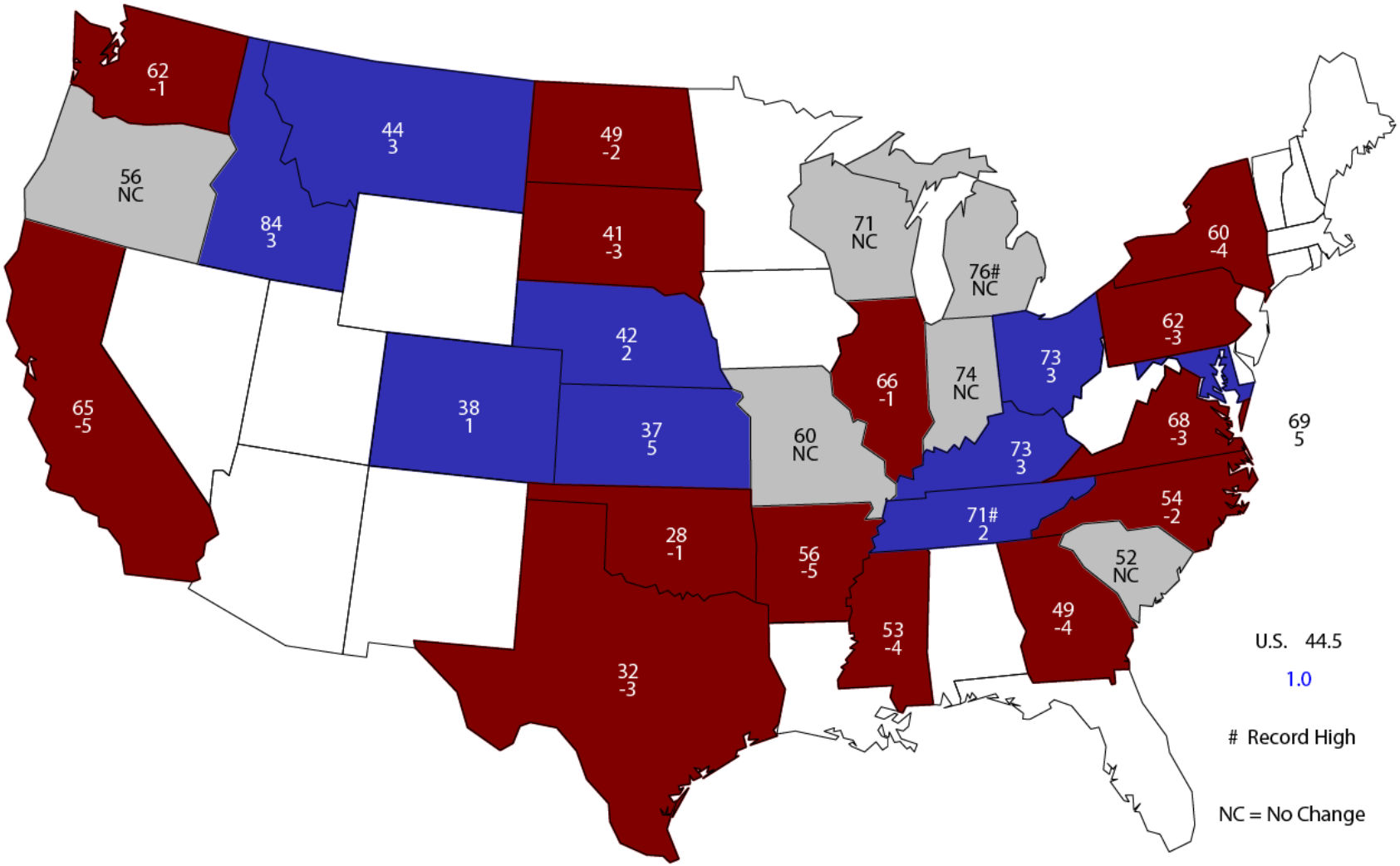
- 101.2 million bushels
- up 9.36 million bushels or 10 percent from last year

Yield

- June 1 yield forecast is 44 bushels per acre
- Up 3 bushels from previous forecast and a year ago.

June 1, 2015 Winter Wheat Yield

Bushels and Change From Previous Month



USDA-NASS
6-10-15

Crop Weather Report
Week Ending June 14, 2015

- Topsoil and subsoil moisture conditions were comparable to a year ago but worse than the five year average.

- Crops progress continues to track ahead of last year and the five year progress.

Topsoil Moisture

Week Ending June 14, 2015

	This week	Last week	Last year	5-yr avg.
Very short	6	6	5	3
Short	29	28	24	12
Adequate	57	57	59	62
Surplus	8	9	12	23

Adequate and surplus condition is 65 percent. Below the 5 year average and last year.

Subsoil Moisture

Week Ending June 14, 2015

	This week	Last week	Last year	5-yr avg.
Very short	6	7	5	5
Short	23	22	23	14
Adequate	60	58	66	64
Surplus	11	13	6	17

Adequate and surplus condition is 71 percent. Below the 5 year average and last year.

Winter Wheat Condition
Week Ending June 14, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	2	7	34	37	20
Last week	2	7	35	37	19
Last year	2	7	29	51	11
5-yr avg.	2	7	28	46	17

Good and excellent condition is 57 percent. Below the 5 year average and last year.

Spring Wheat Condition
Week Ending June 14, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	3	4	33	51	9
Last week	3	3	32	51	11
Last year	1	3	42	48	6
5-yr avg.	1	3	34	53	9

Good and excellent condition is 60 percent. Slightly below the 5 year average, but above last year.

Barley Condition
Week Ending June 14, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	1	4	33	43	19
Last week	1	4	33	44	18
Last year	0	4	48	39	9
5-yr avg.	0	4	33	48	15

Good and excellent condition is 62 percent. Slightly below the 5 year average, but above last year.

Dry Peas Condition
Week Ending June 14, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	2	3	35	33	14
Last week	2	3	35	31	14
Last year	1	2	36	54	7
5-yr avg.	1	2	22	65	10

Good and excellent condition is 47 percent. Below the 5 year average and last year.

Seeding Completed
Week Ending June 14, 2015

	This week	Last week	Last year	5-yr avg.
Dry Beans	95	88	85	90
Potatoes	95	89	79	91

Blooming
Week Ending June 14, 2015

	This week	Last week	Last year	5-yr avg.
Dry Peas	16	7	26	12
Canola	43	19	10	10
Flaxseed	8	0	2	3
Lentils	24	5	16	7

Boot Stage & Heading
Week Ending June 14, 2015

	This week	Last week	Last year	5-yr avg.
Barley	65	29	7	16
Oats	41	17	16	14
Spring Wheat	42	17	7	10
Winter Wheat	95	90	47	61
Headed Winter Wheat	63	38	21	18
Barley	3	NA	0	1

Livestock Grazing
Week Ending June 14, 2015

- 96 percent of Cattle and Calves have been moved to summer ranges, ahead of 90 last year and the five-year average of 88 percent.

- 96 percent of Sheep and Lambs have been moved to summer ranges, ahead of last years 90 percent and the five-year average of 86 percent.

Range & Pasture Feed Condition
Week Ending June 14, 2015

	Very poor	Poor	Fair	Good	Excellent
This week	4	16	41	32	7
Last week	4	17	40	32	7
Last year	4	12	31	43	10
5-yr avg.	3	10	27	43	17

Good and excellent condition is 39 percent. Below the 5 year average and last year.

Summary
Week ending June 14, 2015

- Soil moistures were below the five year averages
- 6.2 days were suitable for field work during the week, compared to 5.4 days last year and the five year average of 4.3 days
- Planting is almost complete
- Winter wheat and barley has started to head
- Ranchers are wrapping up annual movement of livestock to summer ranges

June Releases

- June Hog Report released on June 26
- June Acreage, and June Stocks Reports released on June 29

USDA, NASS, Mountain Region: Montana Field Office

Thomas Chard II, Statistician

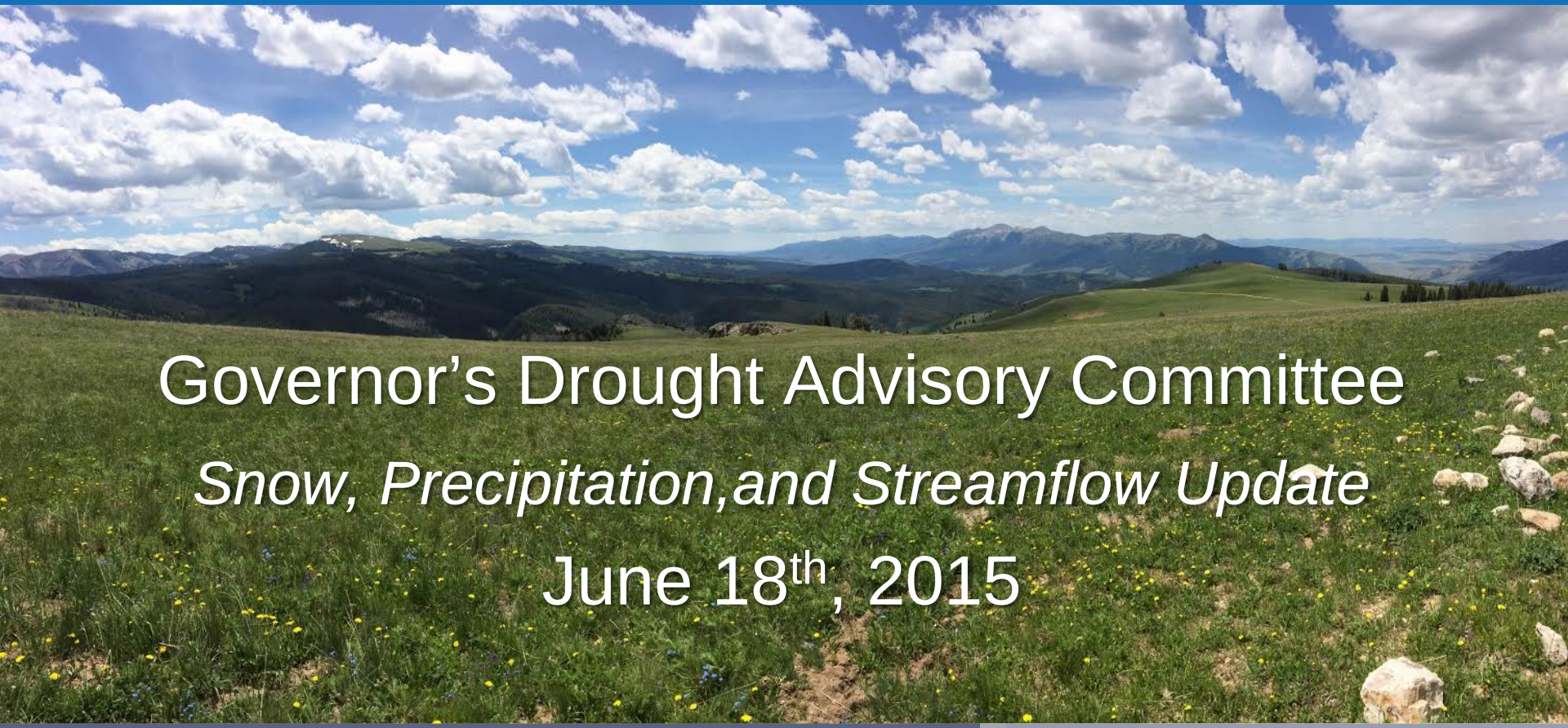
1-800-835-2612 or 406-441-1240

Email: nass-mt@nass.usda.gov

Montana Data available at following address:

http://www.nass.usda.gov/Statistics_by_State/Montana/index.asp

Montana Snow Survey



Governor's Drought Advisory Committee

Snow, Precipitation,and Streamflow Update

June 18th, 2015

Lucas Zukiewicz
Water Supply Specialist (Snow Hydrologist)
USDA-NRCS
Montana Snow Surveys
Lucas.Zukiewicz@mt.usda.gov
406-587-6843
http://www.nrcs.usda.gov/wps/portal/nrcs/main/mt/snow/

Streamflows in the coming months will rely on summer precipitation and groundwater contributions, almost all elevations have melted out, and high elevations are ahead of schedule reducing summer flows.

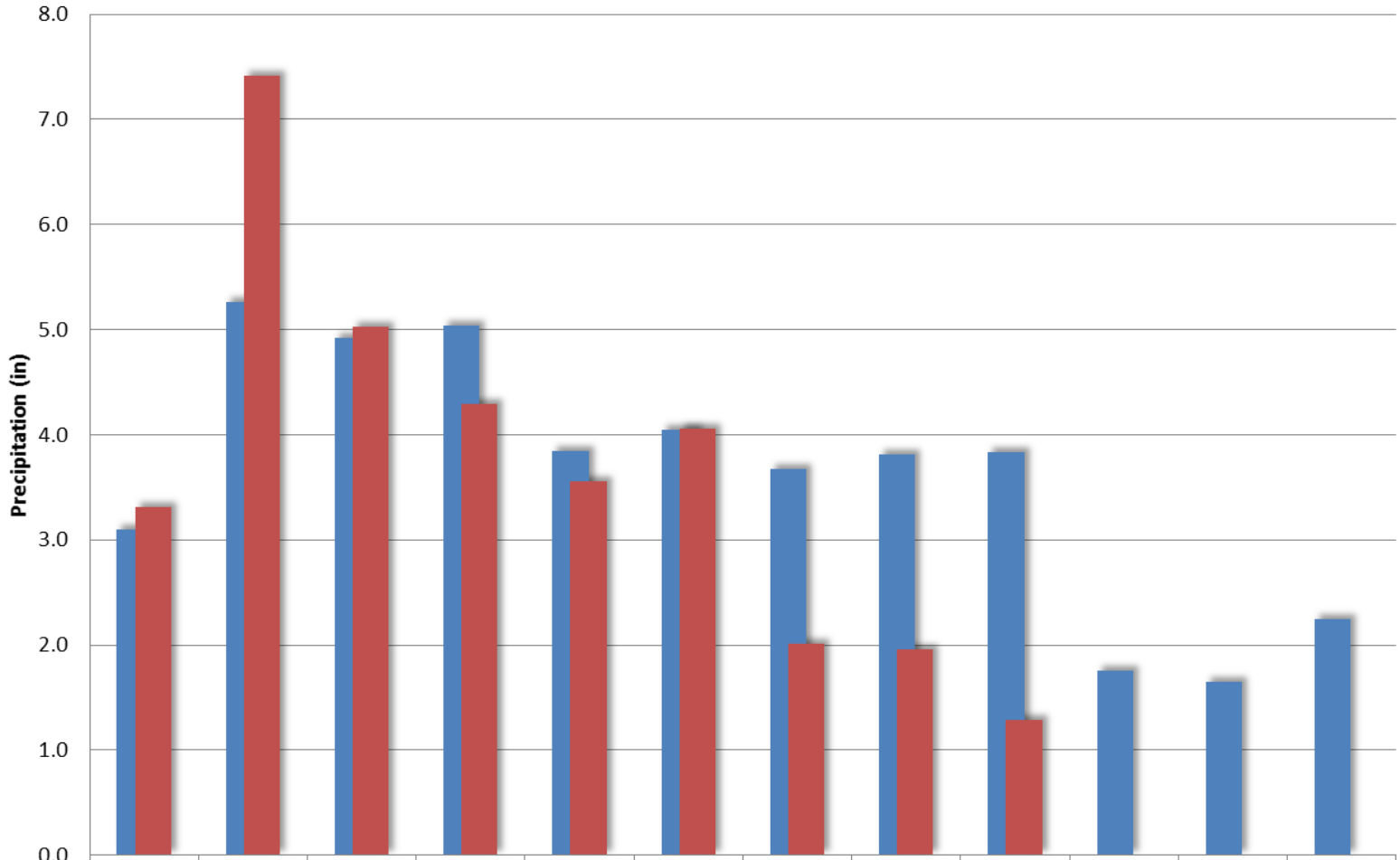
Photo: Looking towards the headwaters of the Ruby River from the Gravelly Range, MT. June 17th, 2015. Lucas Zukiewicz

Precipitation

Montana Snow Survey

Columbia In Montana

SNOTEL Monthly Precipitation
6/17/2015

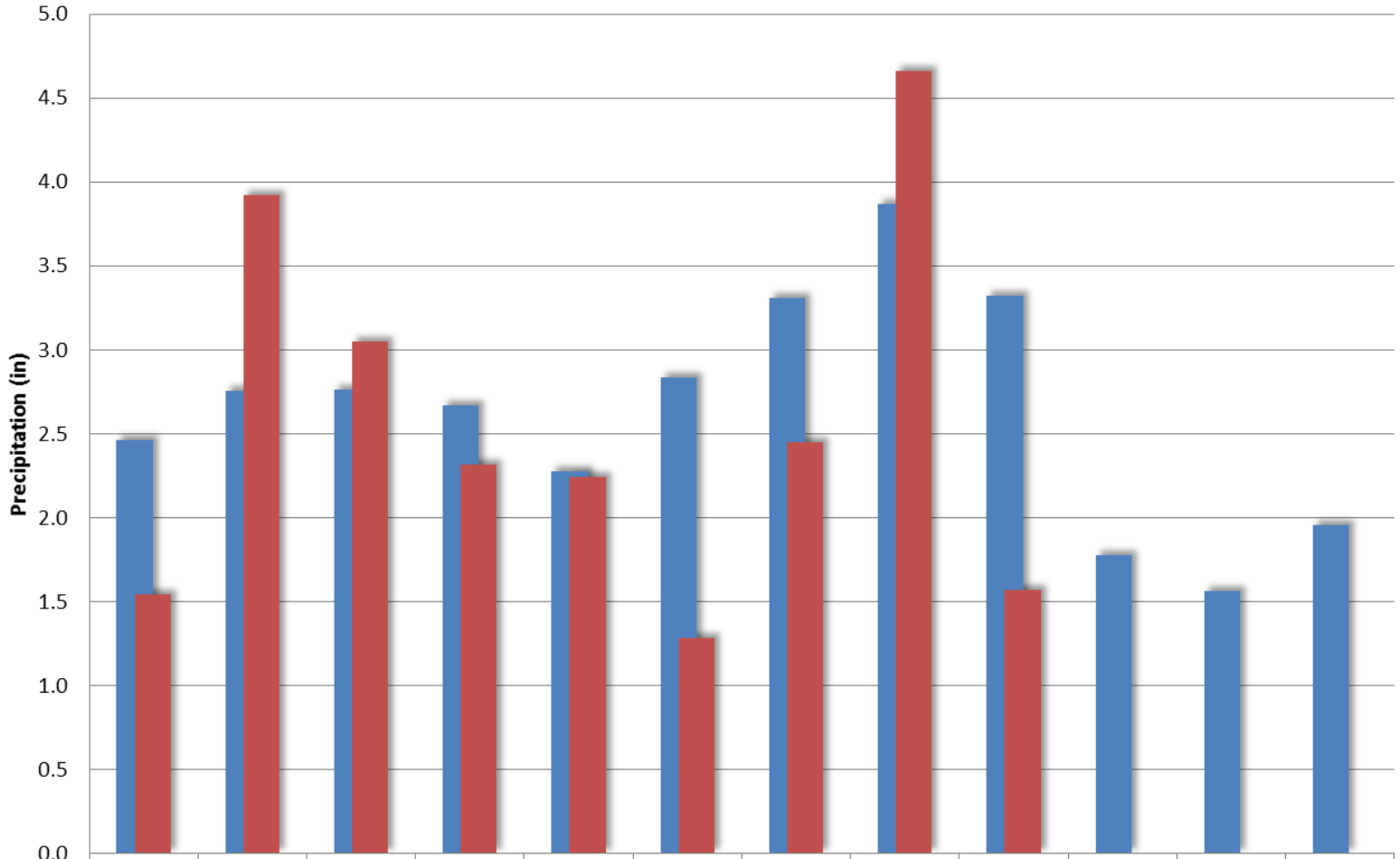


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Avg Monthly PCP (in)	3.1	5.3	4.9	5.0	3.8	4.0	3.7	3.8	3.8	1.8	1.6	2.2
Monthly PCP (in)	3.3	7.4	5.0	4.3	3.6	4.1	2.0	2.0	1.3	0.0	0.0	0.0

Montana Snow Survey

East of Divide

SNOTEL Monthly Precipitation
6/17/2015

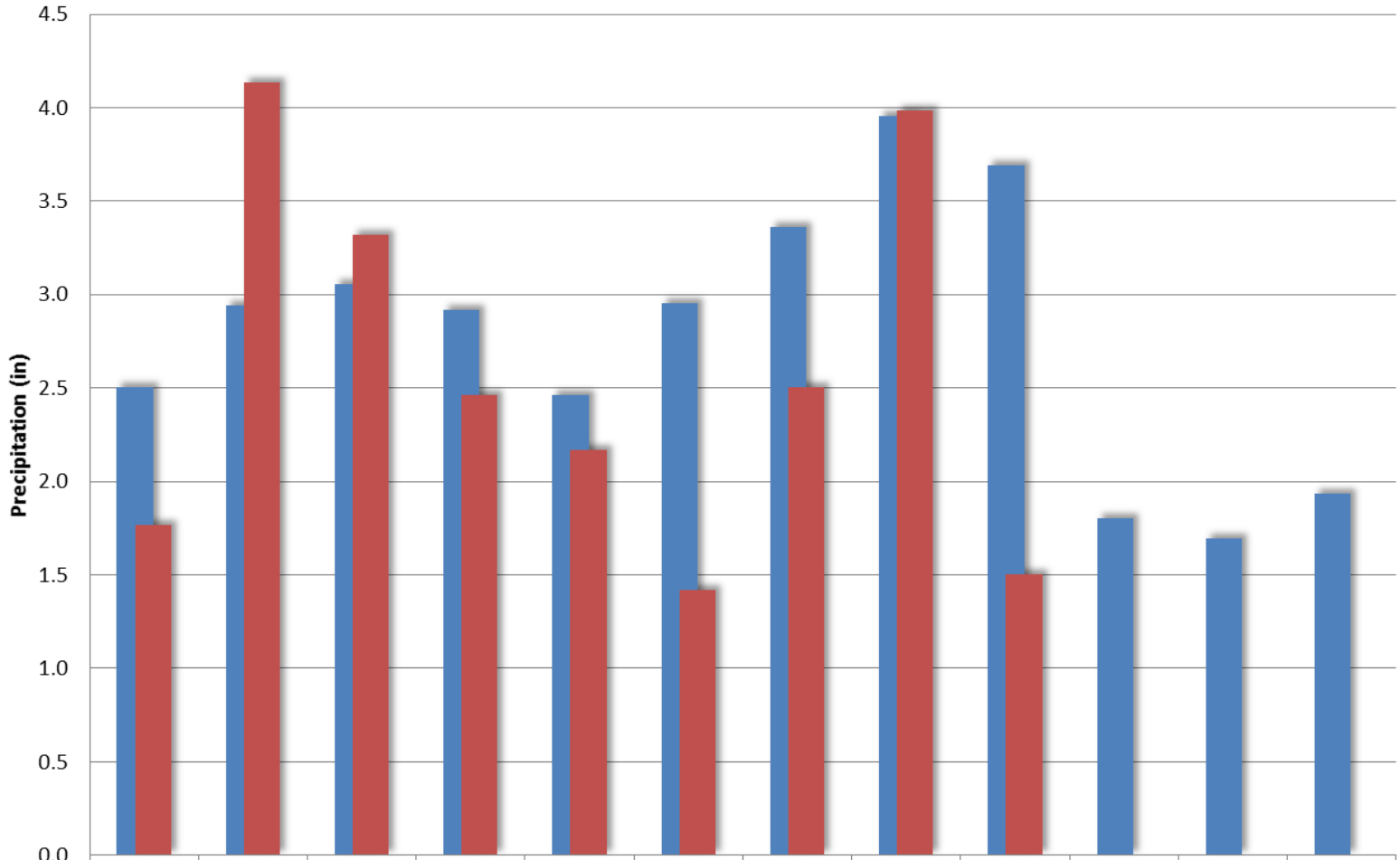


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Avg Monthly PCP (in)	2.5	2.8	2.8	2.7	2.3	2.8	3.3	3.9	3.3	1.8	1.6	2.0
Monthly PCP (in)	1.5	3.9	3.1	2.3	2.2	1.3	2.4	4.7	1.6	0.0	0.0	0.0

Montana Snow Survey

Missouri River Basin

SNOTEL Monthly Precipitation
6/17/2015

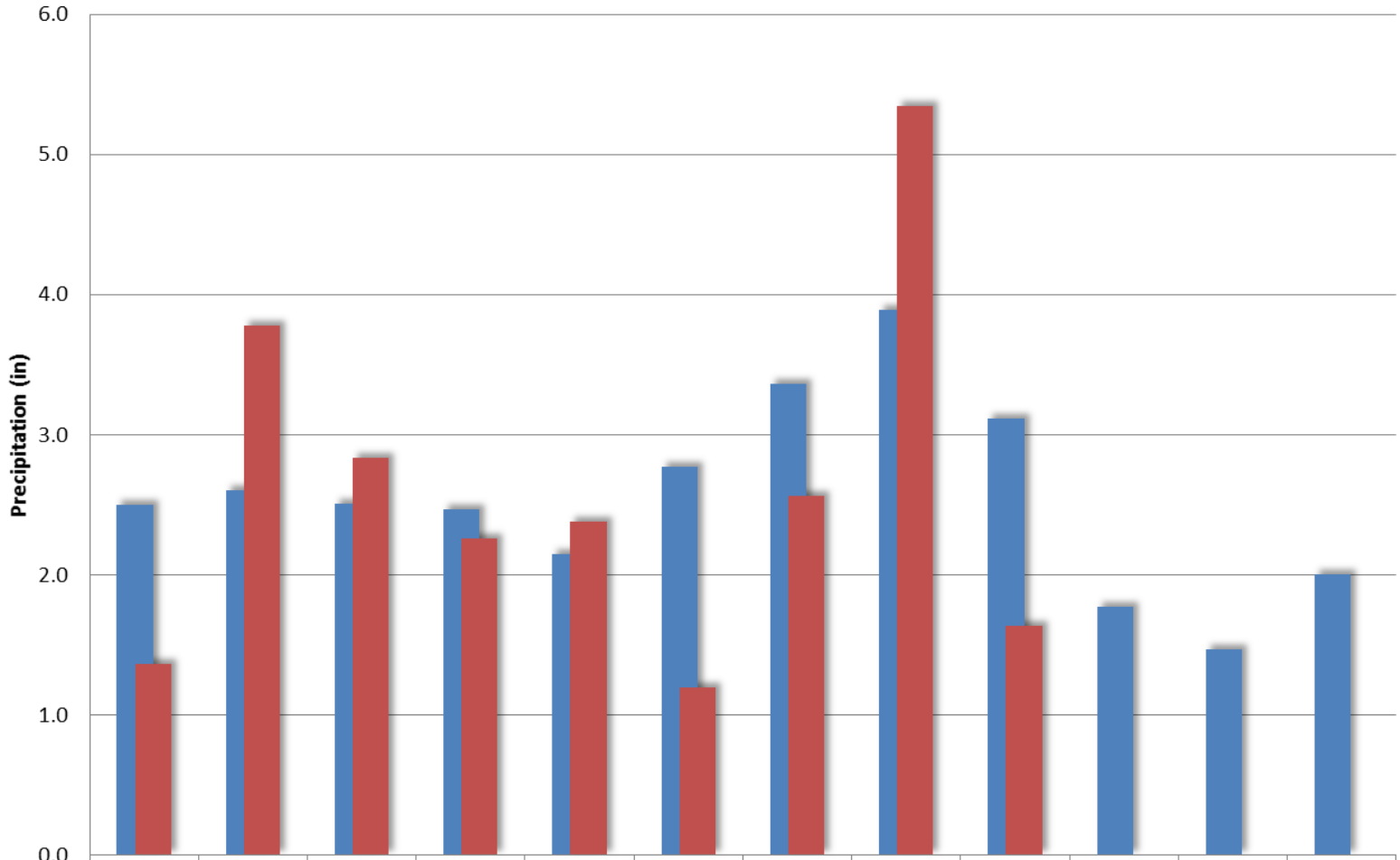


	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Avg Monthly PCP (in)	2.5	2.9	3.1	2.9	2.5	3.0	3.4	4.0	3.7	1.8	1.7	1.9
Monthly PCP (in)	1.8	4.1	3.3	2.5	2.2	1.4	2.5	4.0	1.5	0.0	0.0	0.0

Montana Snow Survey

Yellowstone River Basin

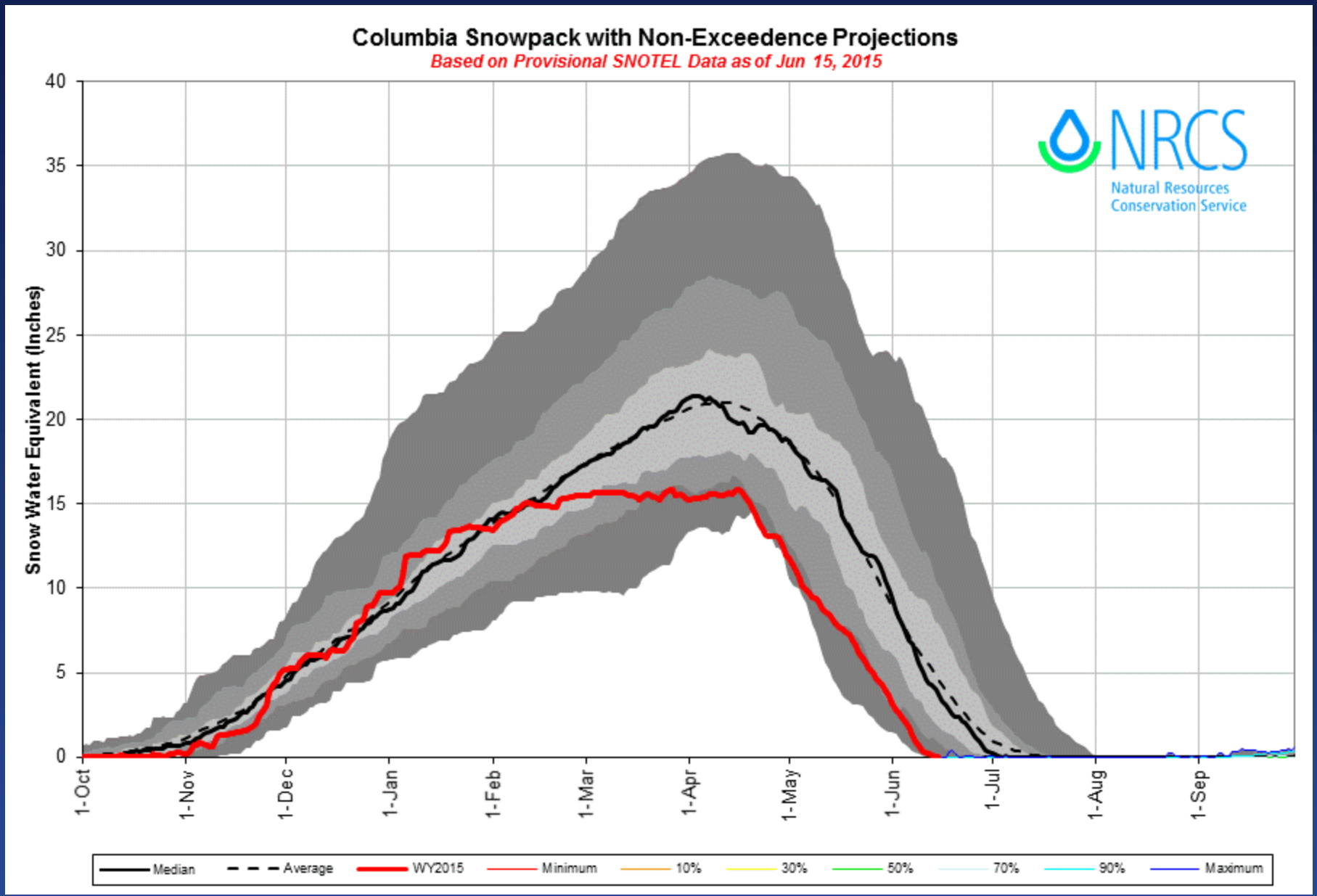
SNOTEL Monthly Precipitation
6/17/2015



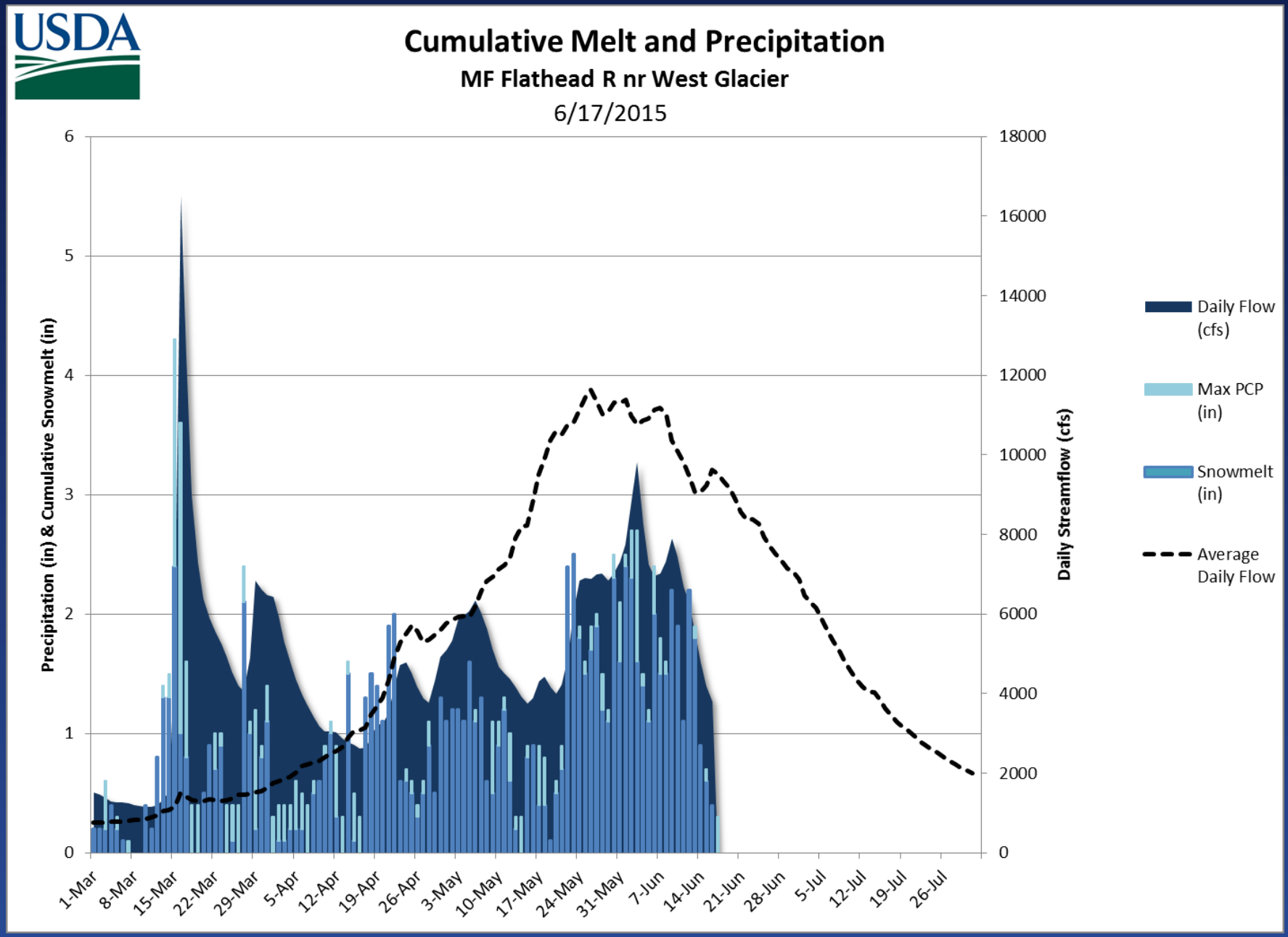
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept
Avg Monthly PCP (in)	2.5	2.6	2.5	2.5	2.1	2.8	3.4	3.9	3.1	1.8	1.5	2.0
Monthly PCP (in)	1.4	3.8	2.8	2.3	2.4	1.2	2.6	5.3	1.6	0.0	0.0	0.0

Snowpack

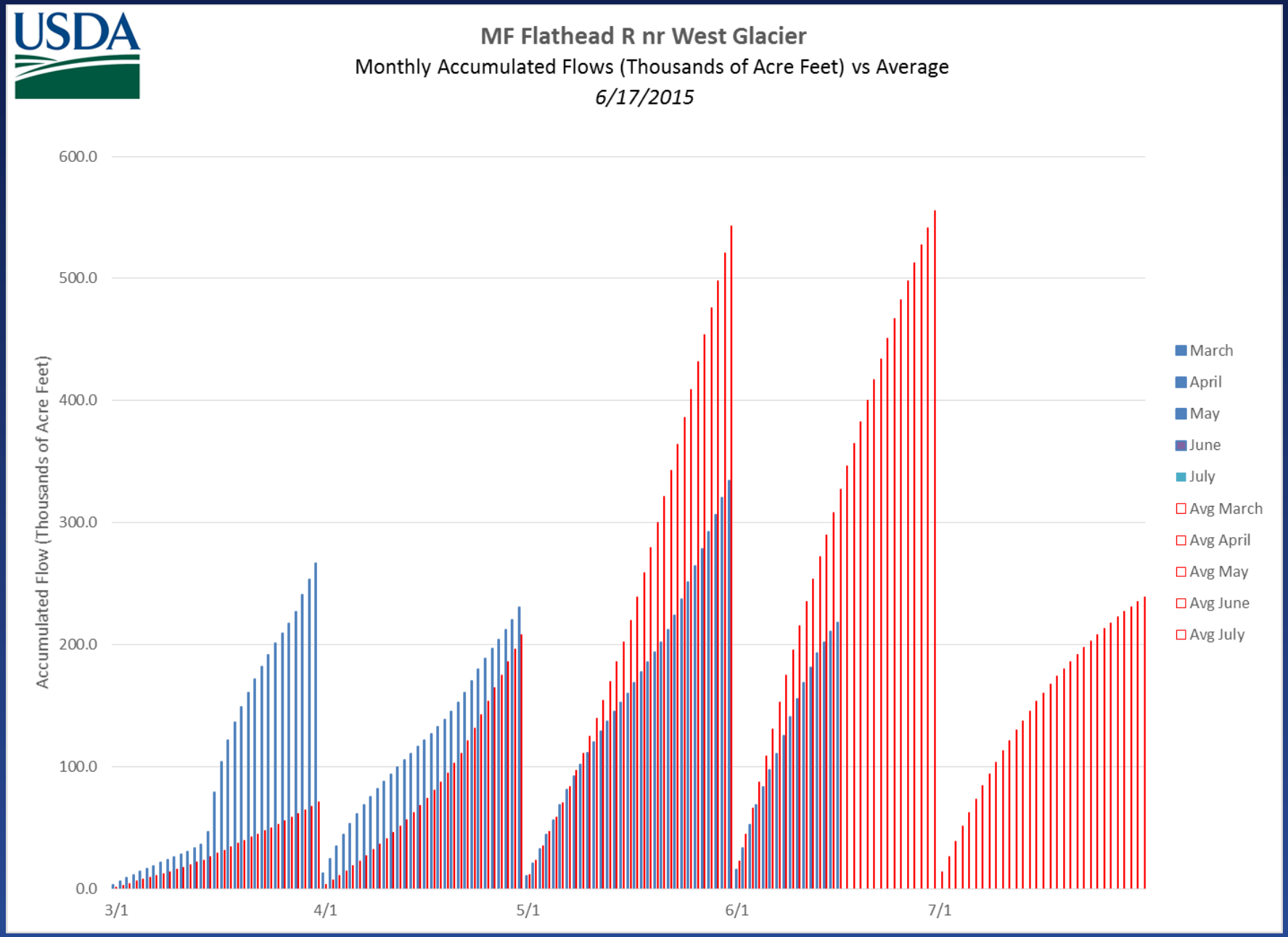
Montana Snow Survey



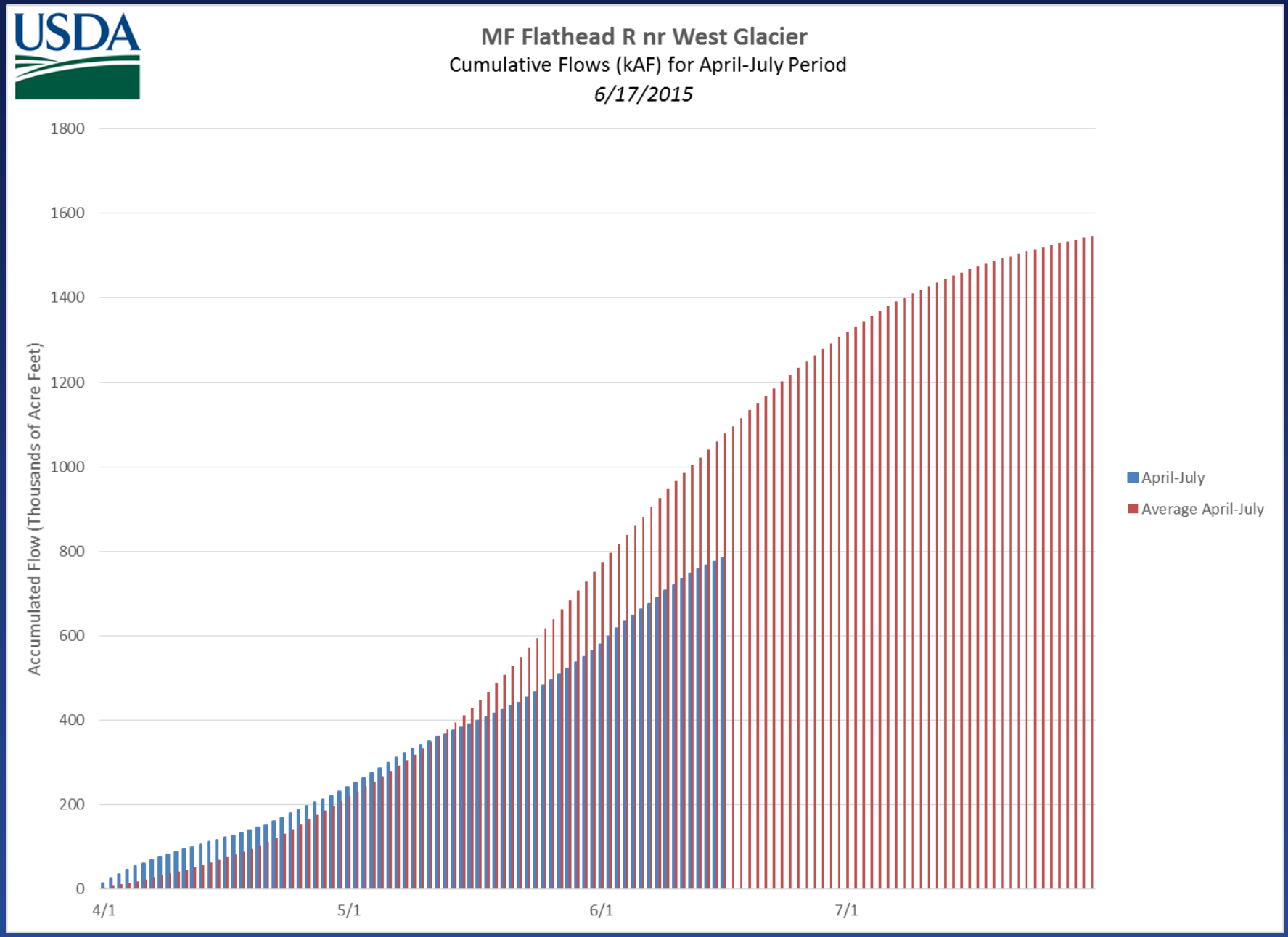
Montana Snow Survey



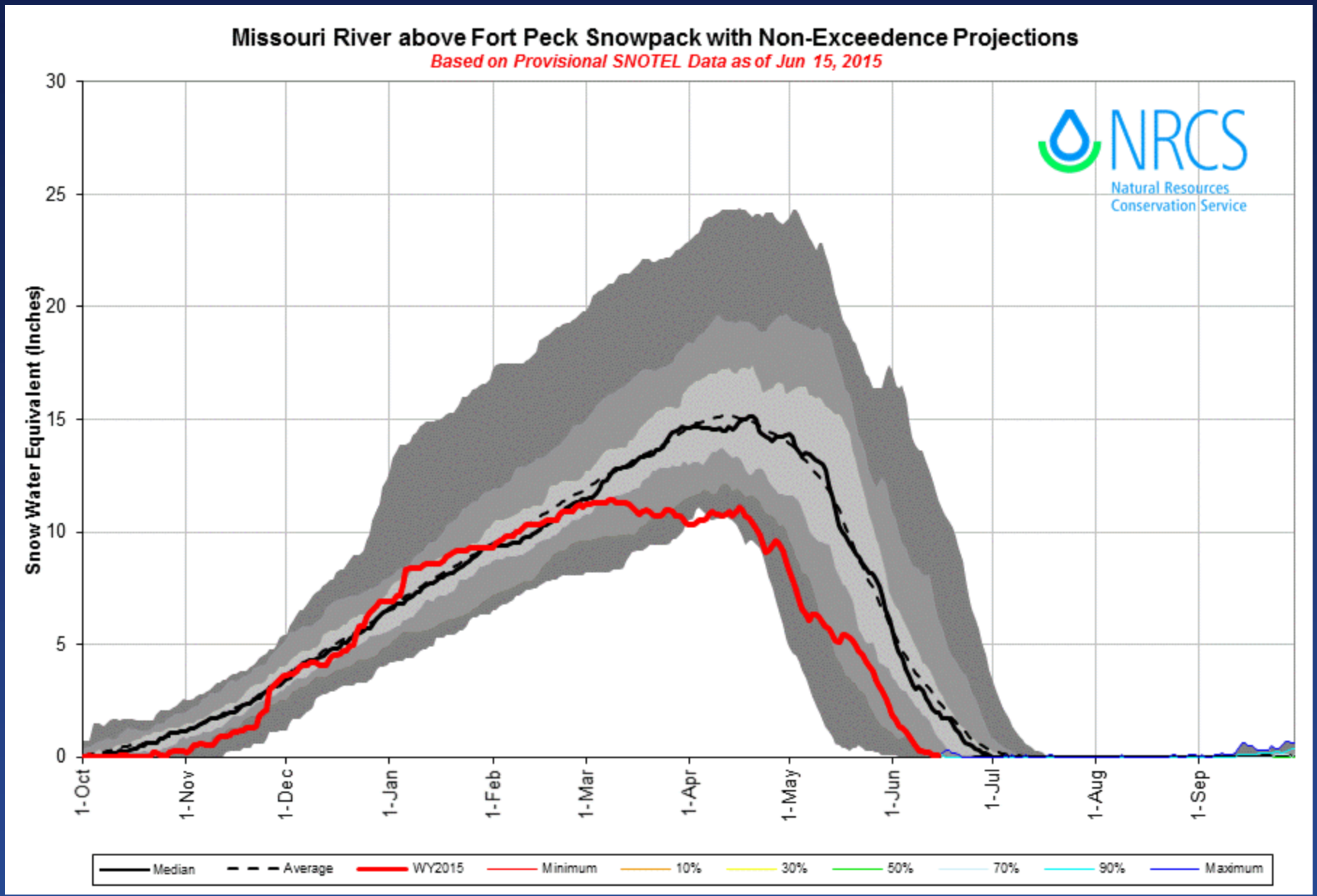
Montana Snow Survey



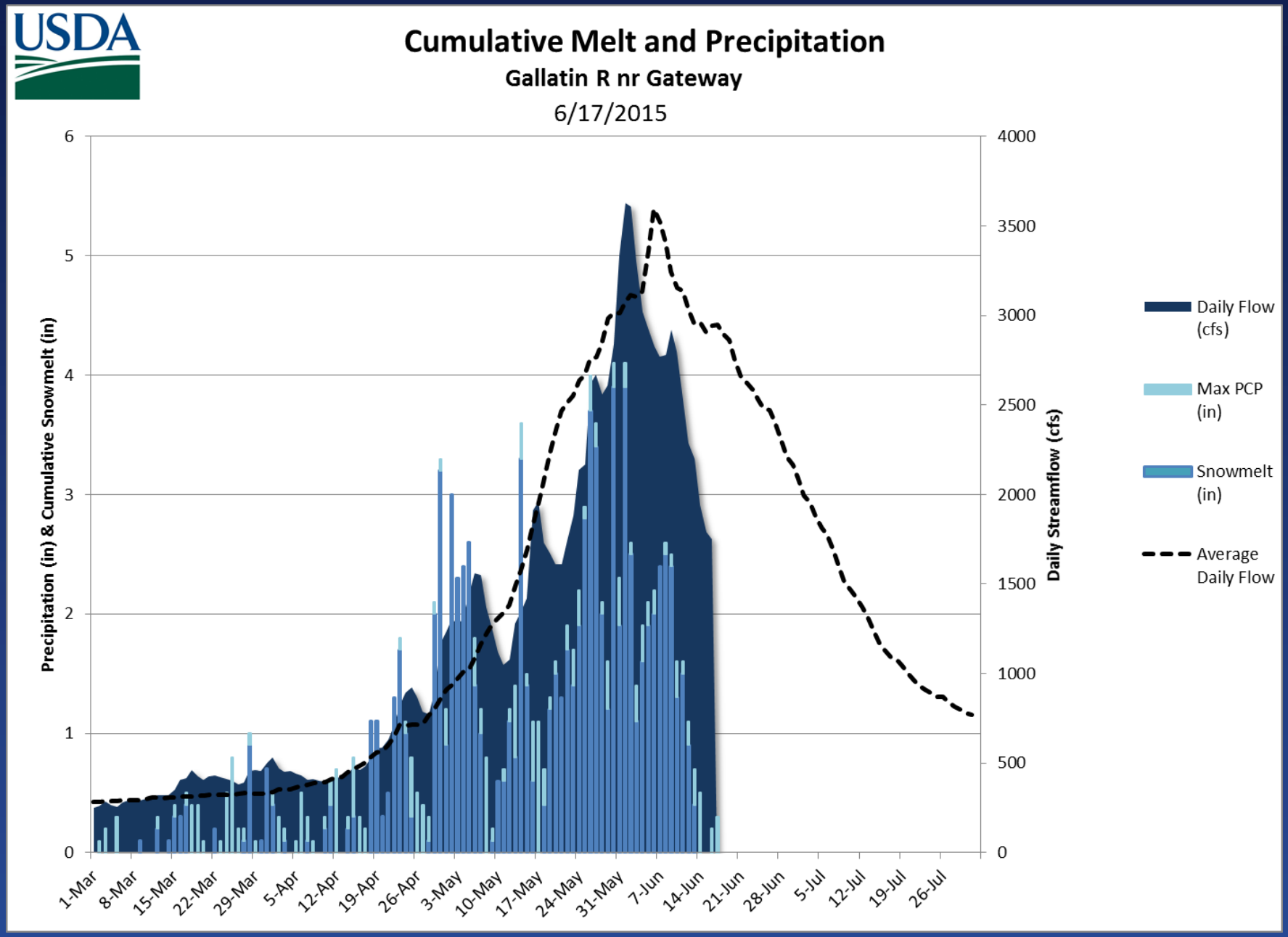
Montana Snow Survey



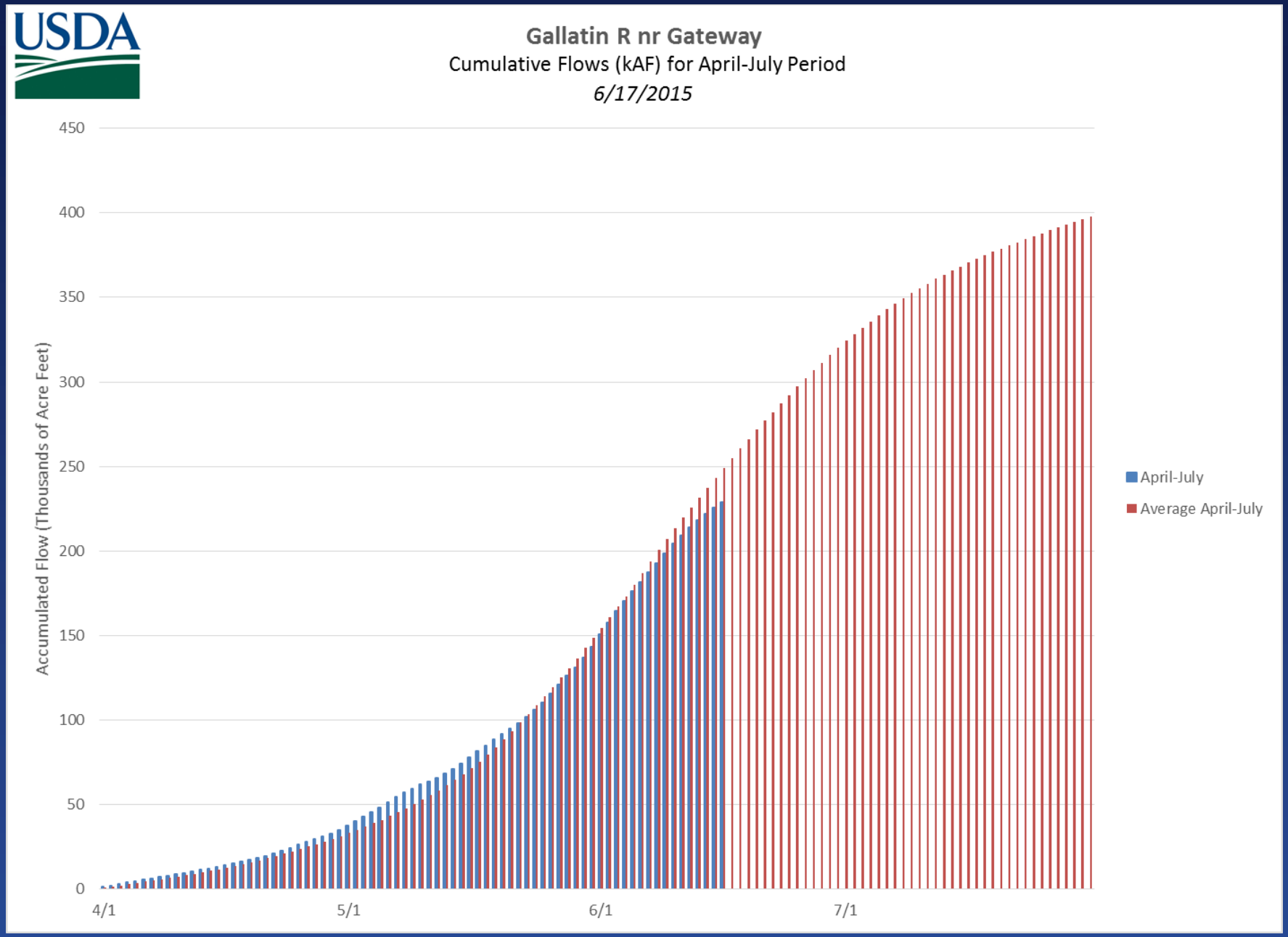
Montana Snow Survey



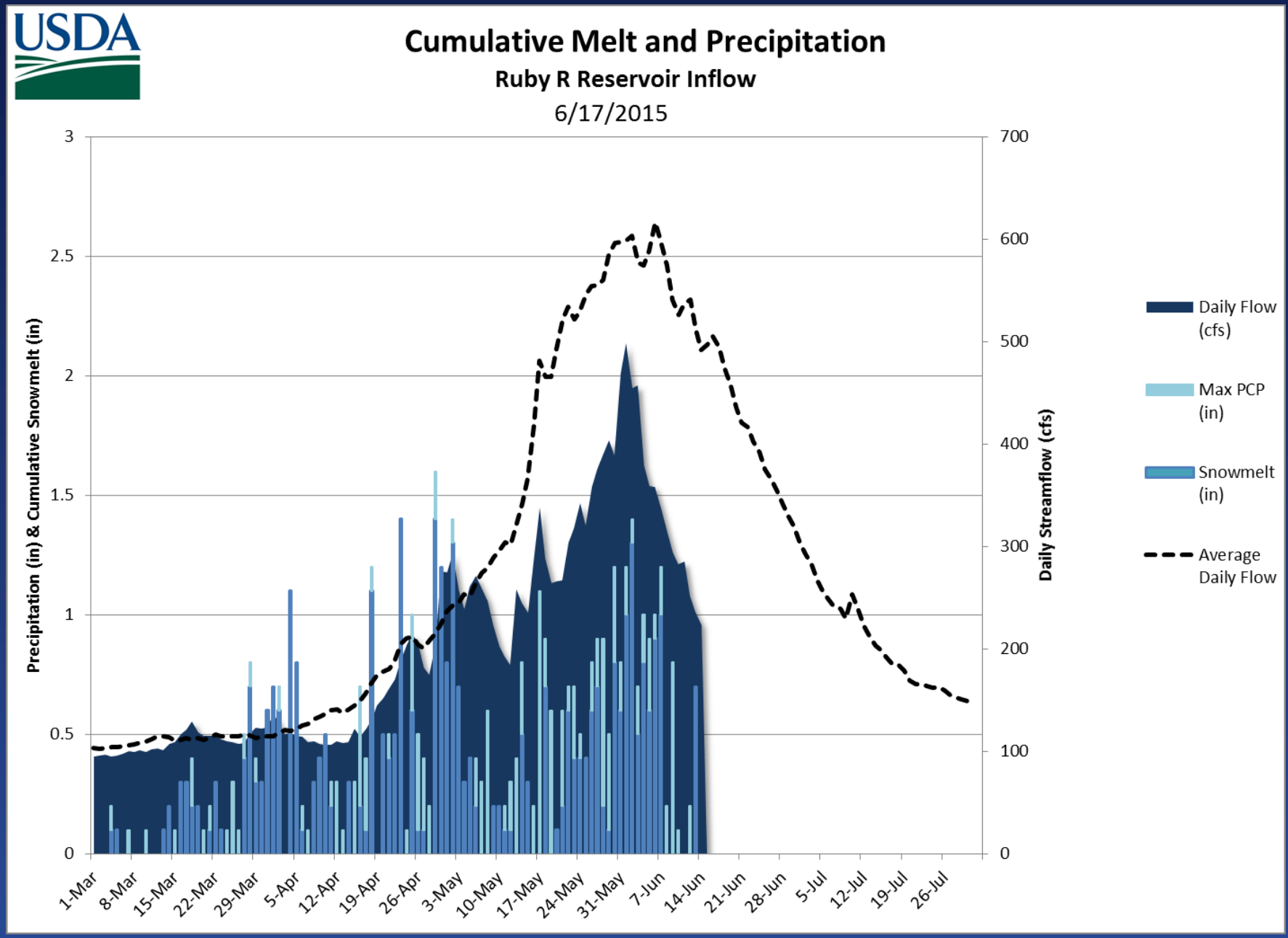
Montana Snow Survey



Montana Snow Survey



Montana Snow Survey



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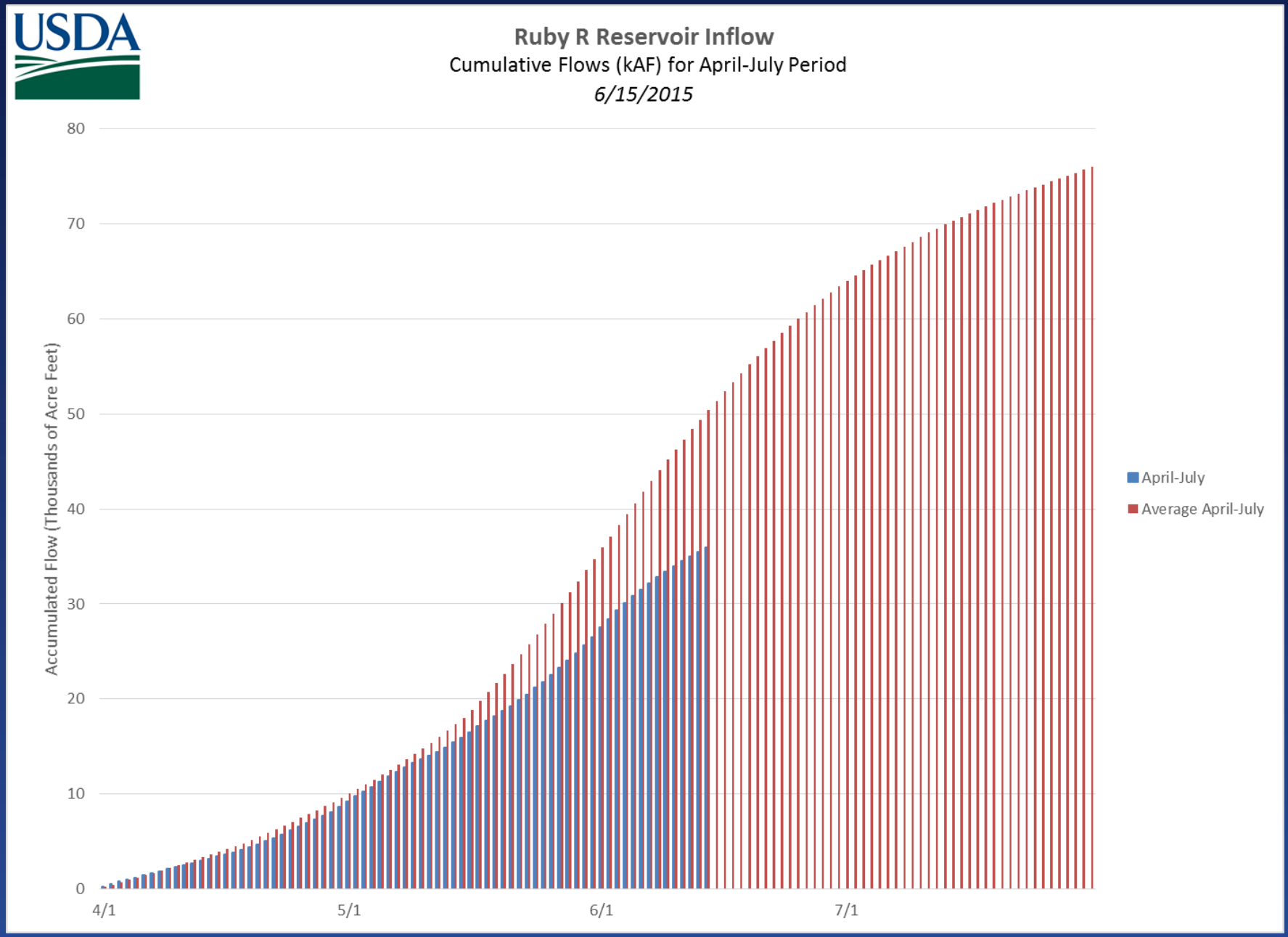
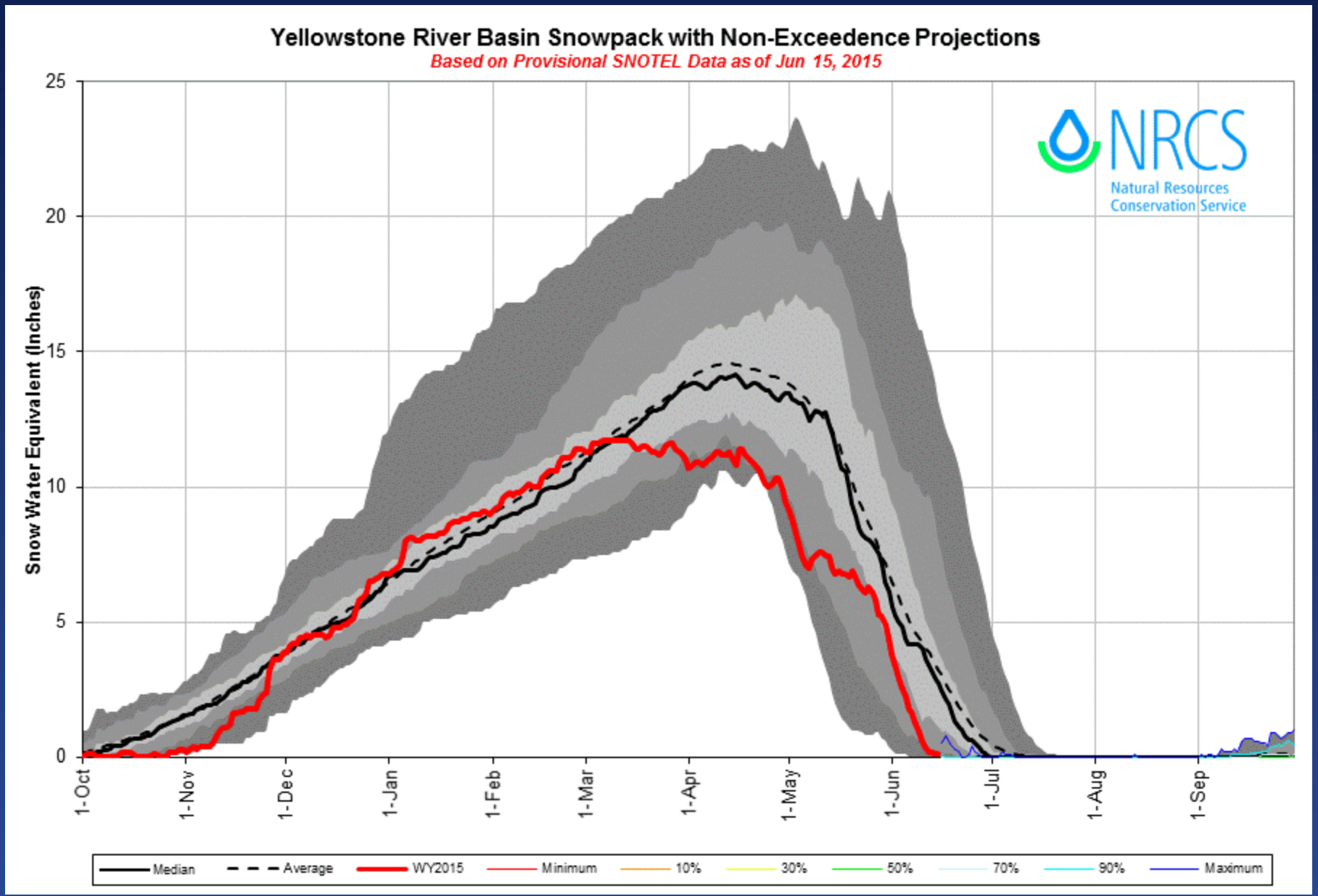


Montana Snow Survey



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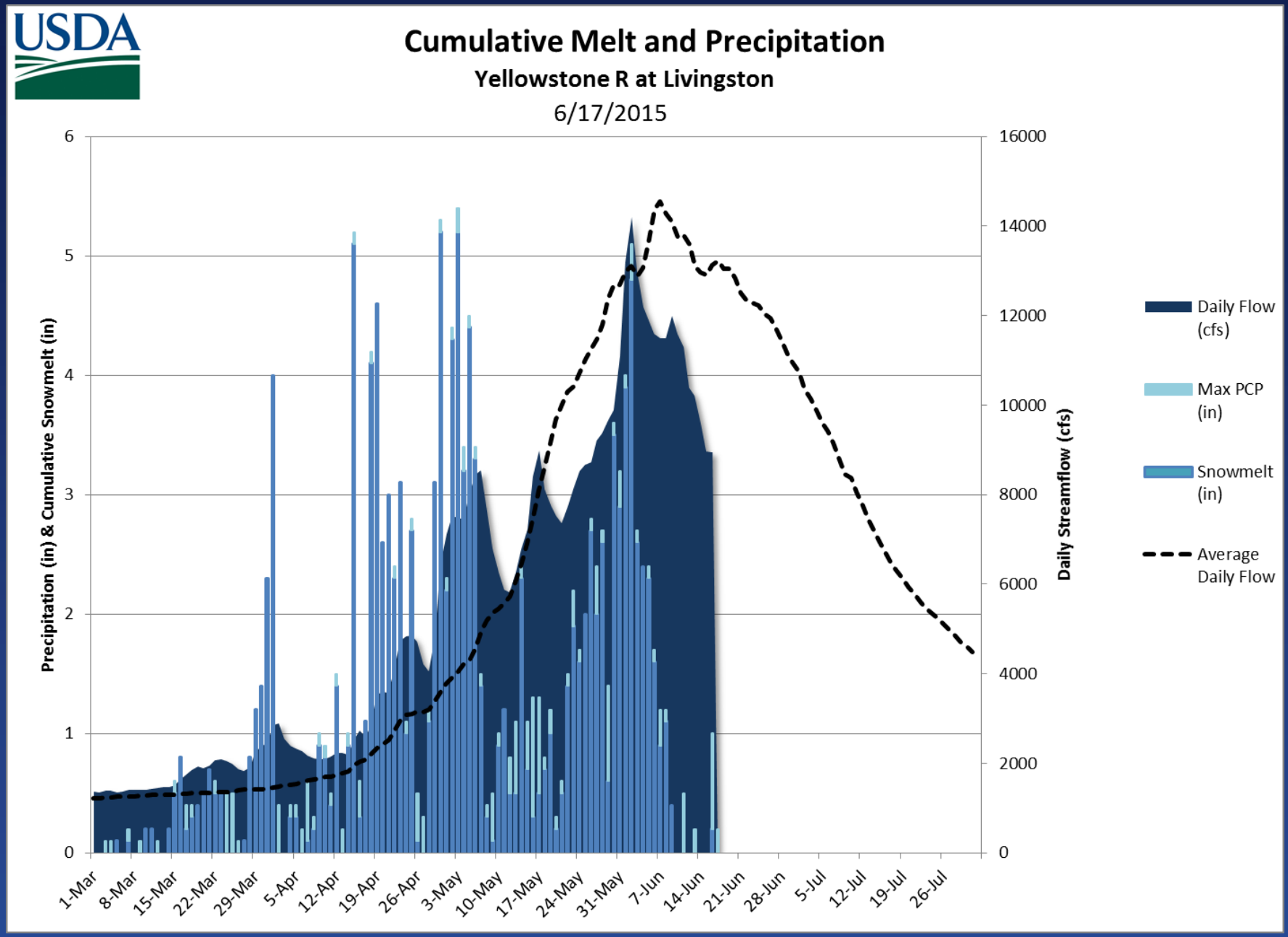

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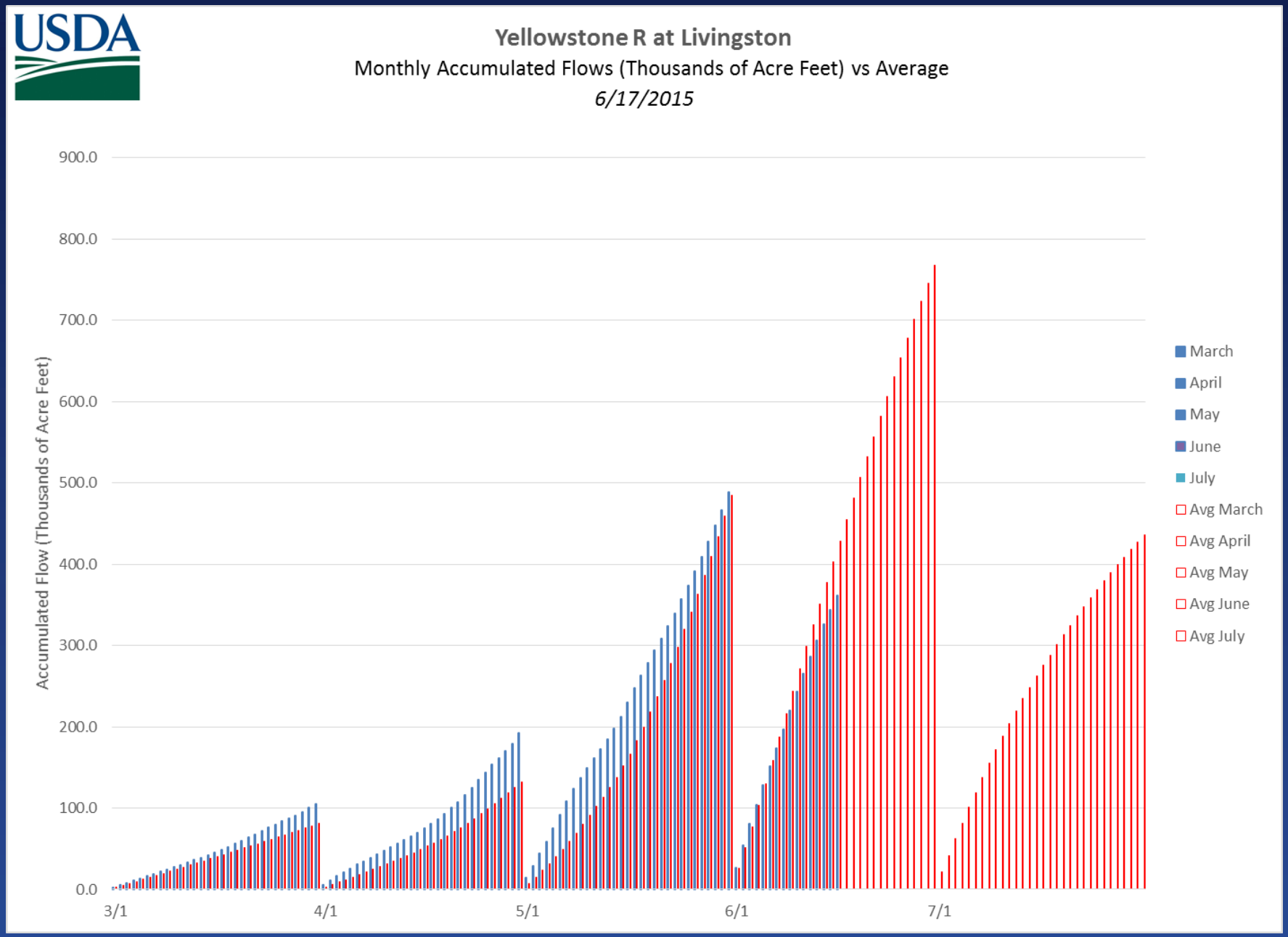
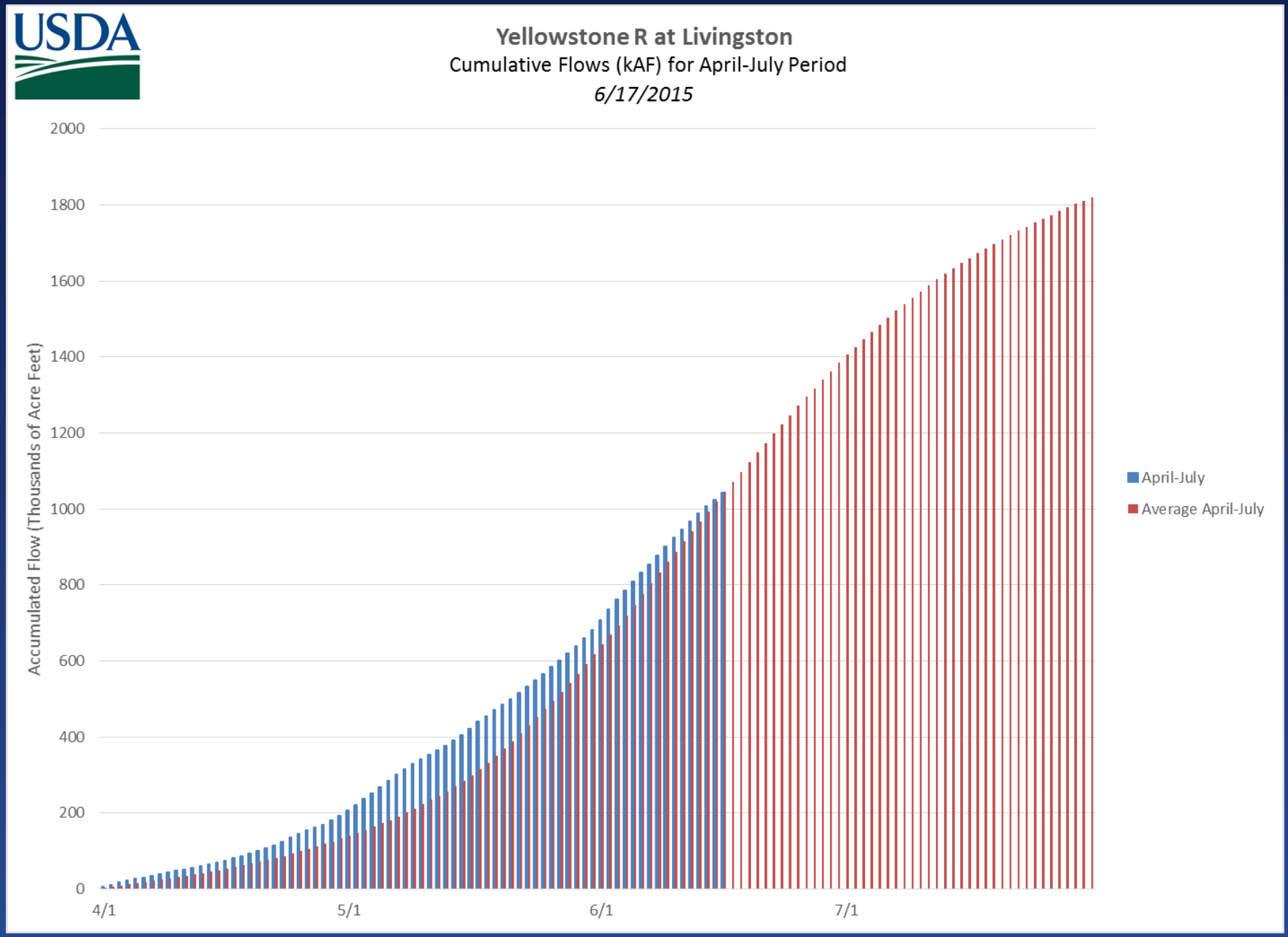
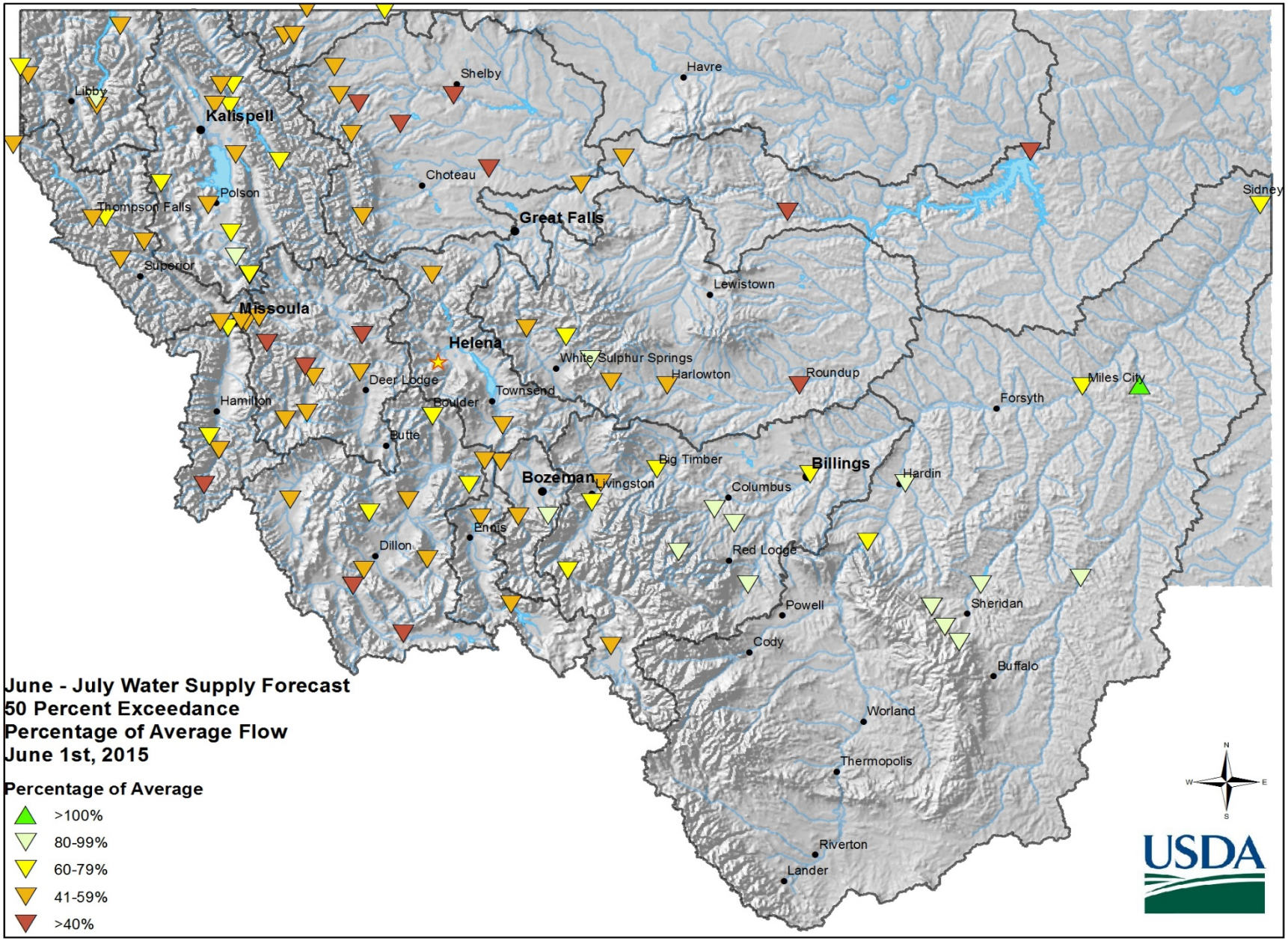


Montana Snow Survey

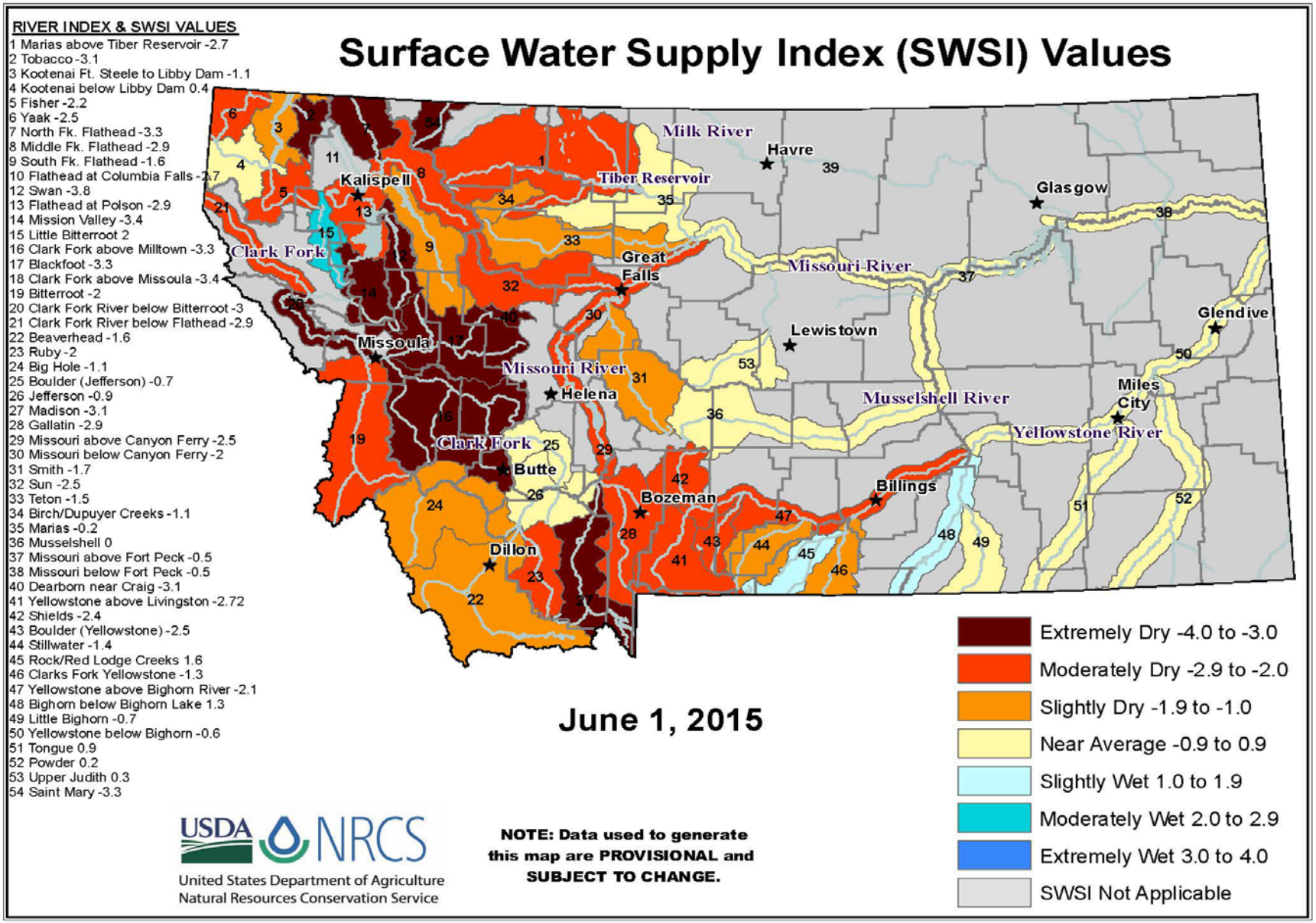


Water Supply

Montana Snow Survey



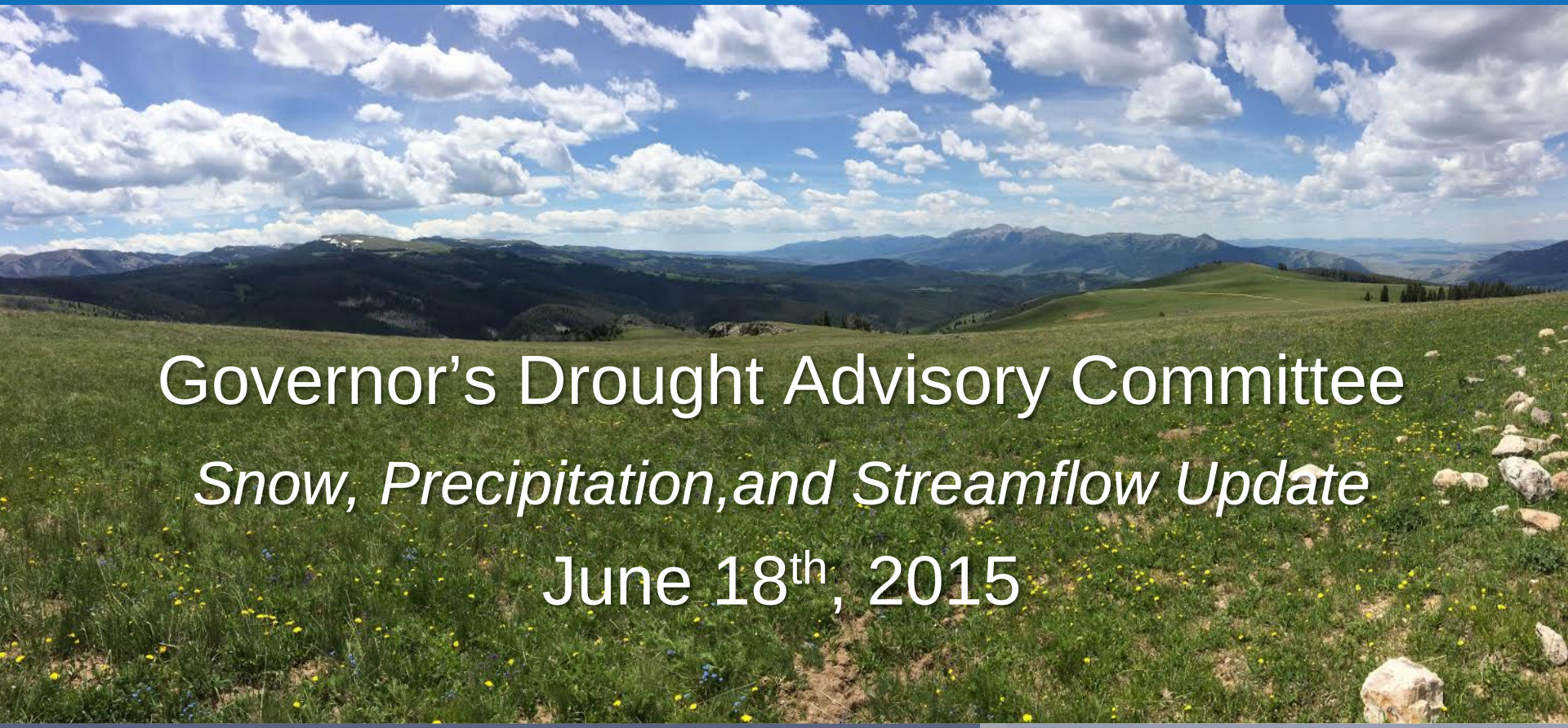
Montana Snow Survey



Summary

- Monthly mountain precipitation was near to well above normal during the month of May east of the Divide, and near record low west of the Divide.
- June precipitation has been slightly below to below normal for this date at most mountain locations, with a few locations in SW MT receiving above average precipitation.
- Snowpack reached maximum accumulation and began melting earlier than normal this year, and peak basin-wide snow water equivalent was near record low in many basins.
- Rivers in Montana have seen their peak snowmelt driven flows. Elevations with SNOTEL sites in the state have melted out at this point. Zero (of 131) SNOTEL sites have snow remaining on June 18th. Many melt out dates are new record early dates.
- Summer streamflow volumes will be dependent on precipitation, snowpack component of runoff has passed, upper elevations that provide recession flows have melted well ahead of schedule.

Montana Snow Survey



Governor's Drought Advisory Committee

Snow, Precipitation,and Streamflow Update

June 18th, 2015

Lucas Zukiewicz
Water Supply Specialist (Snow Hydrologist)
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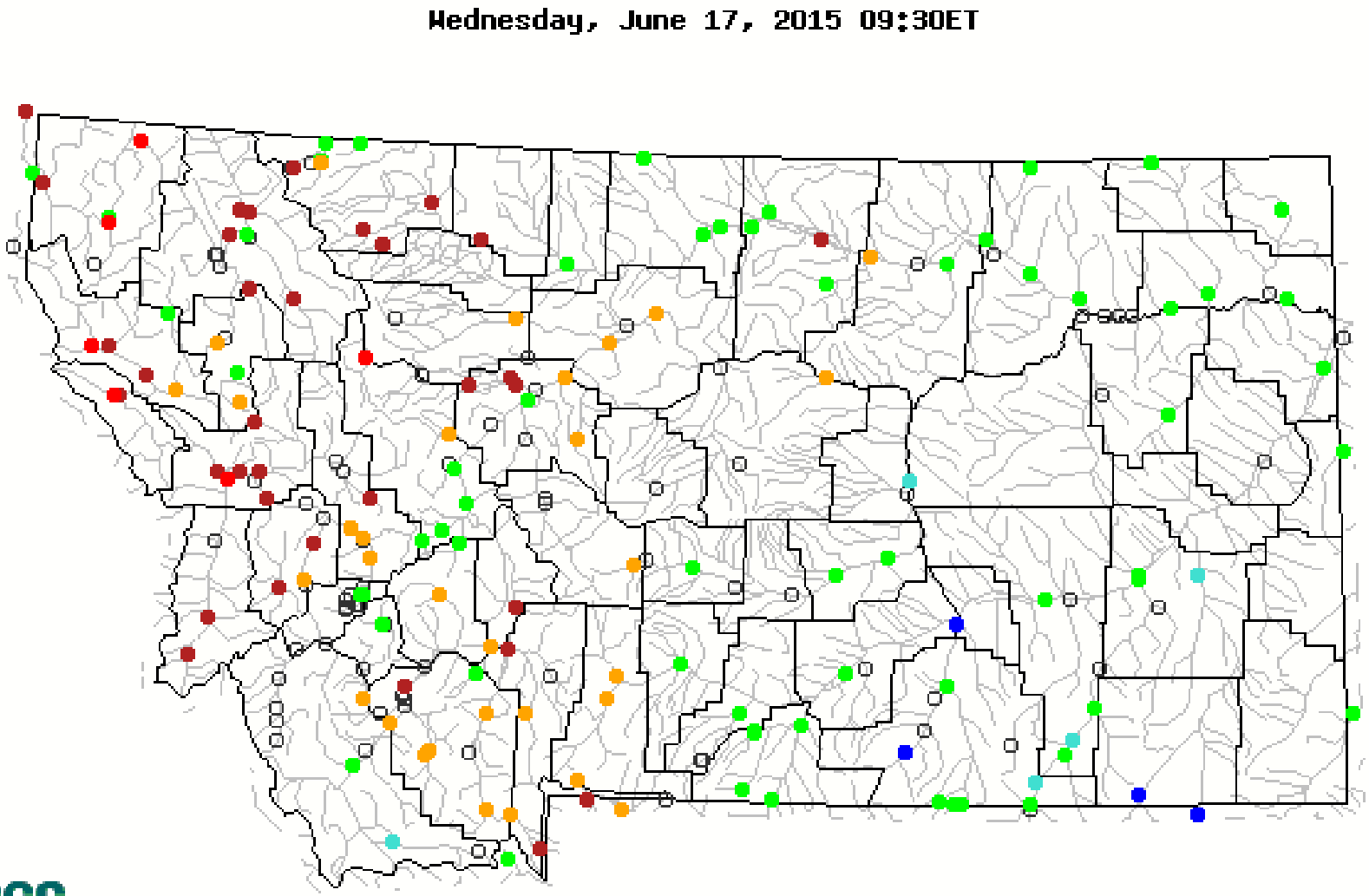
Streamflows in the coming months will rely on summer precipitation and groundwater contributions, almost all elevations have melted out, and high elevations are ahead of schedule reducing summer flows.

Photo: Looking towards the headwaters of the Ruby River from the Gravelly Range, MT. June 17th, 2015. Lucas Zukiewicz


USGS Streamflows, June 2015

DAILY STREAMFLOW CONDITIONS



USGS

Minimum Discharge for June 18

06078500 – North Fork Sun River near Augusta

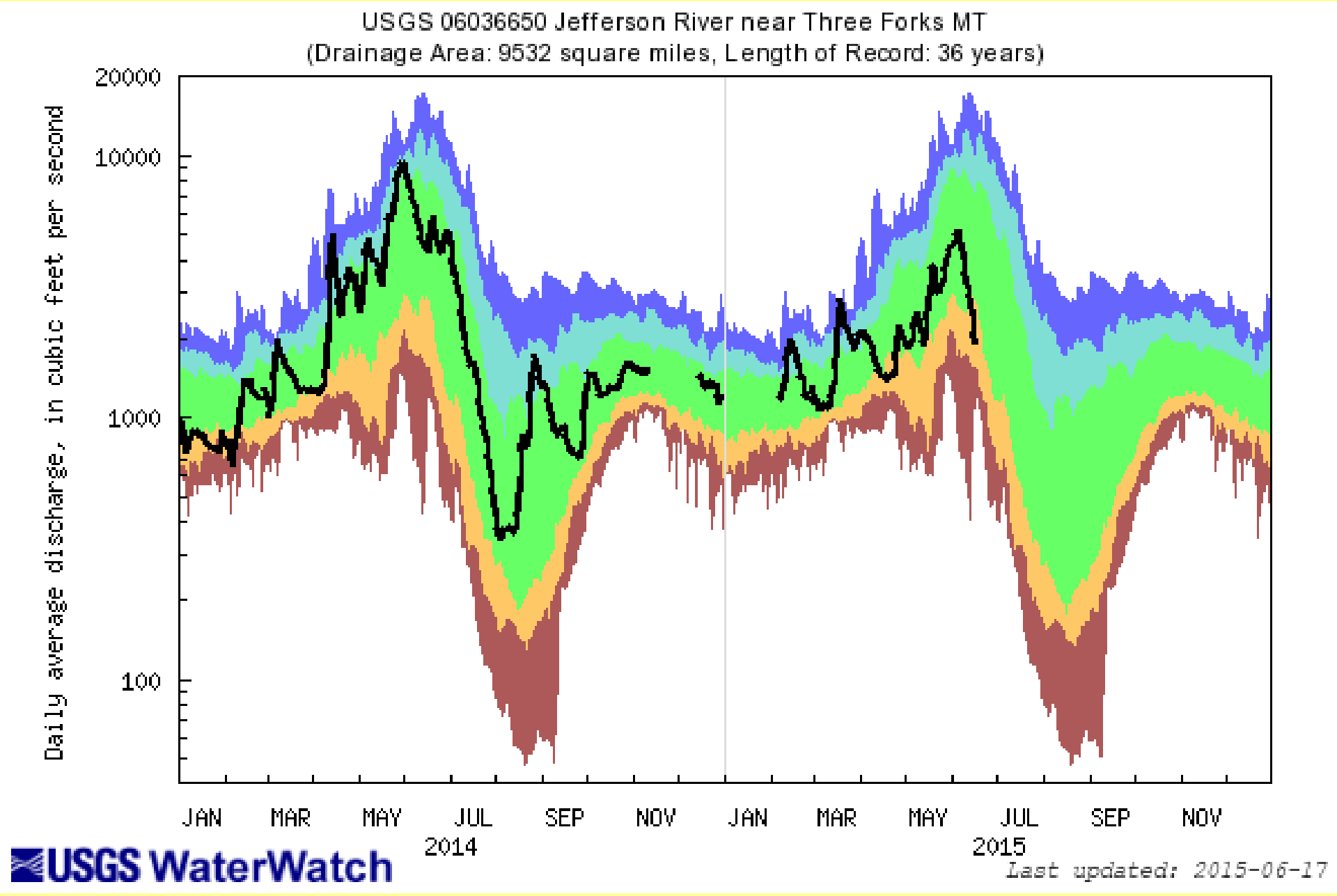
12301300 – Tobacco River near Eureka

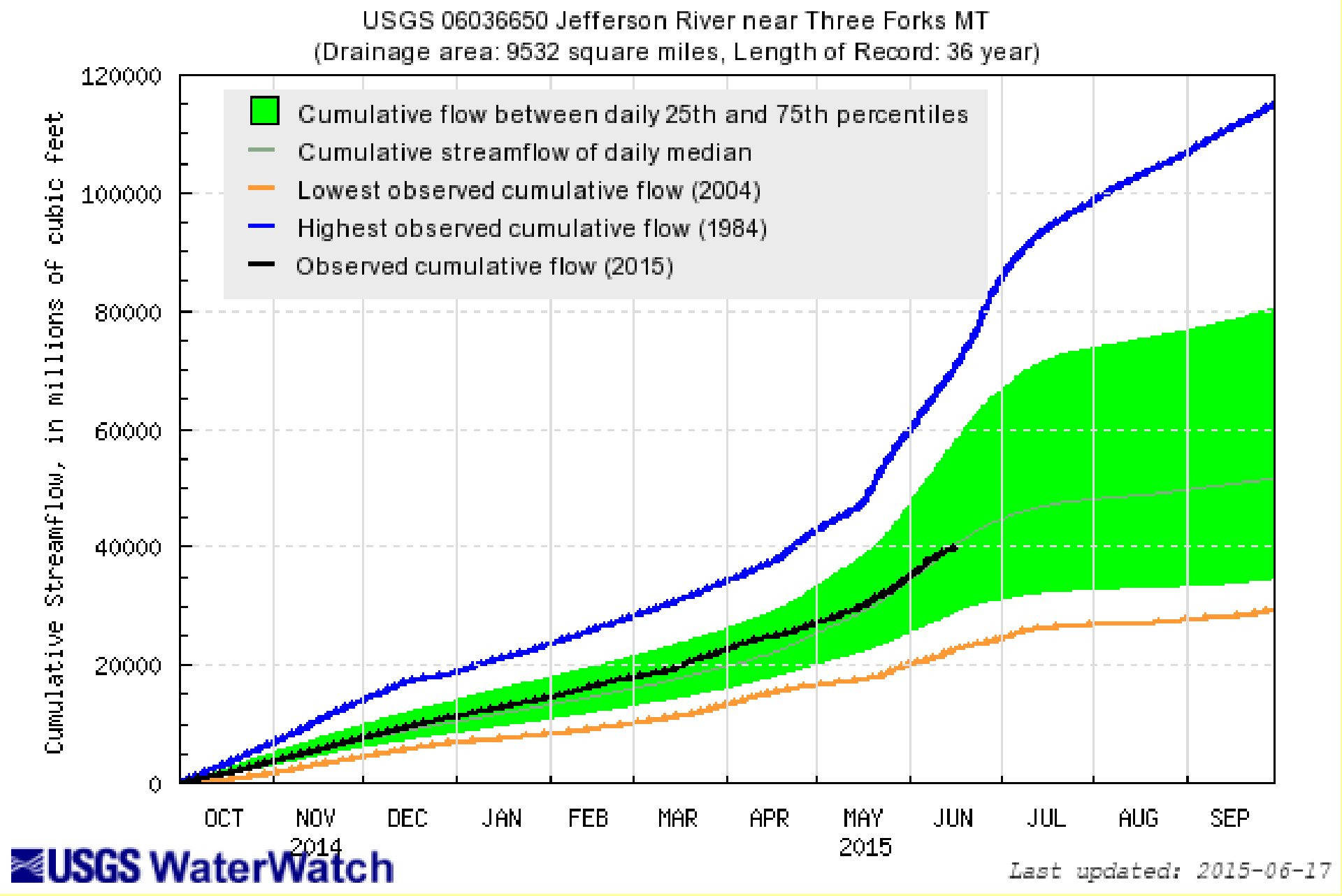
12302055 – Fisher River near Libby

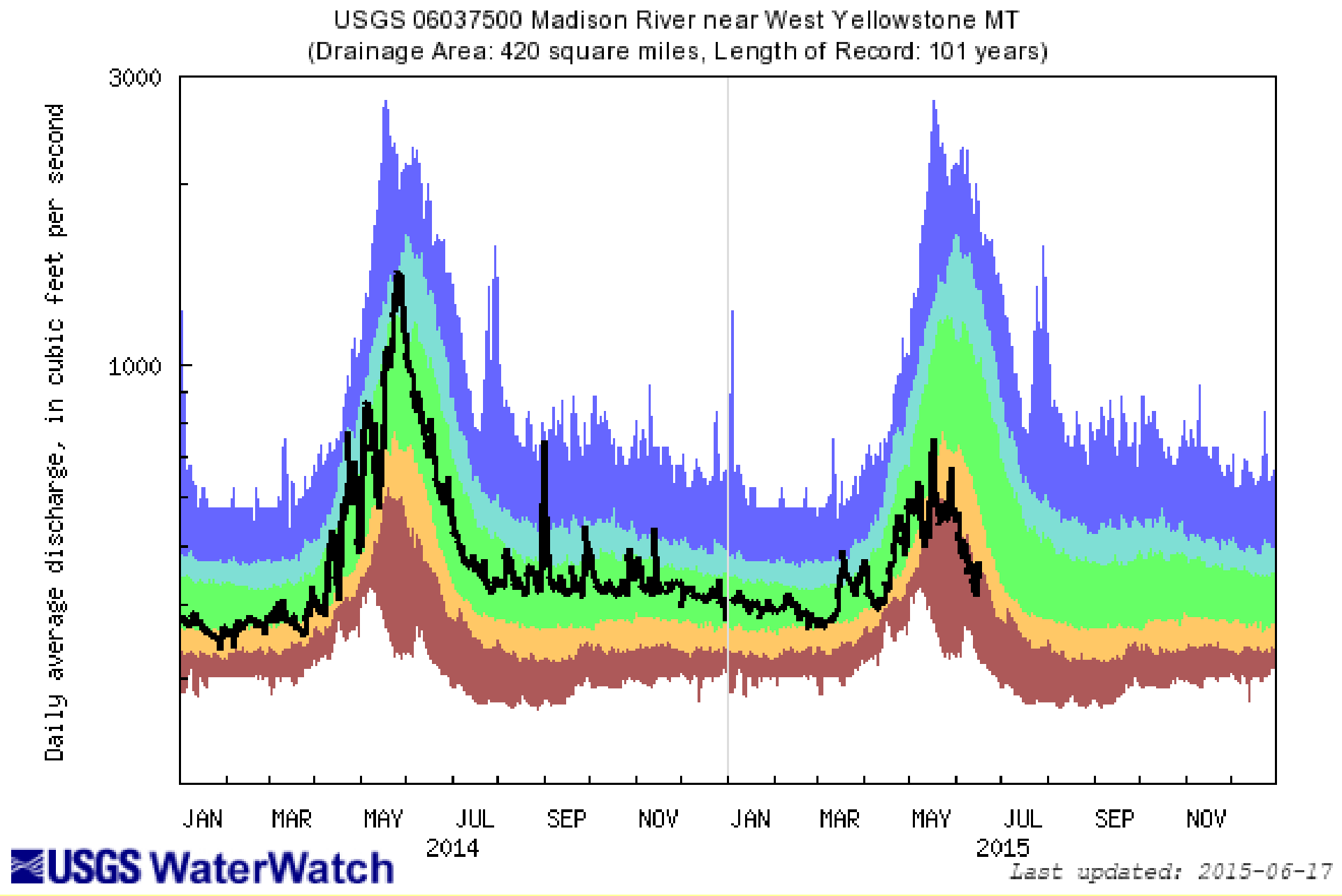
12352500 – Bitterroot River near Missoula

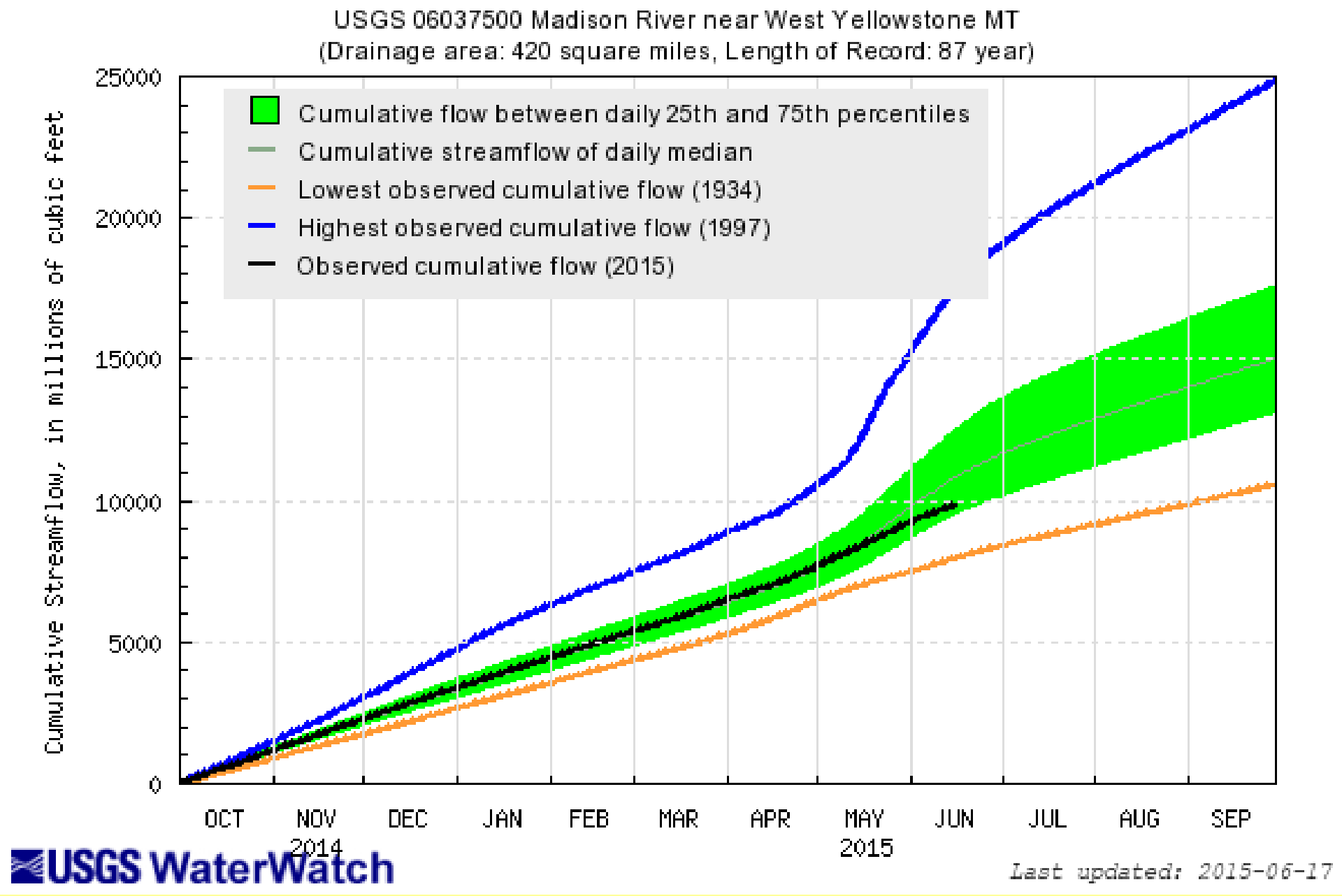
12354000 – St. Regis River near St. Regis

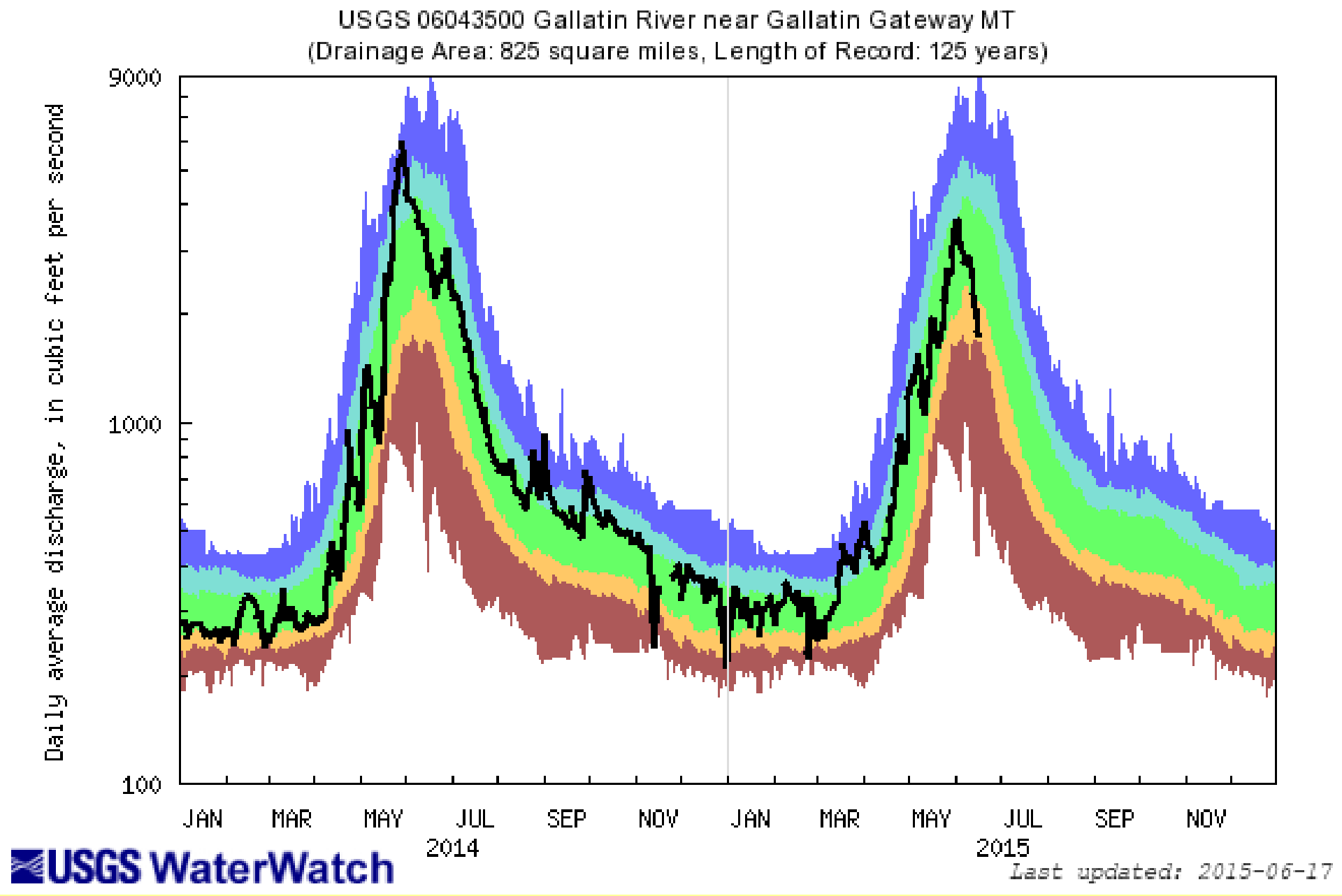
12390700 – Prospect Creek at Thompson Falls


USGS 06036650 Jefferson River near Three Forks MT
(Drainage Area: 9532 square miles, Length of Record: 36 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06036650 Jefferson River near Three Forks MT
(Drainage area: 9532 square miles, Length of Record: 36 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (2004)
Highest observed cumulative flow (1984)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
120000
100000
80000
60000
40000
20000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 06037500 Madison River near West Yellowstone MT
(Drainage Area: 420 square miles, Length of Record: 101 years)
3000
1000
Daily average discharge, in cubic feet per second
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06037500 Madison River near West Yellowstone MT
(Drainage area: 420 square miles, Length of Record: 87 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1997)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 06043500 Gallatin River near Gallatin Gateway MT
(Drainage Area: 825 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
9000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
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25-75
76-90
90th percentile -highest
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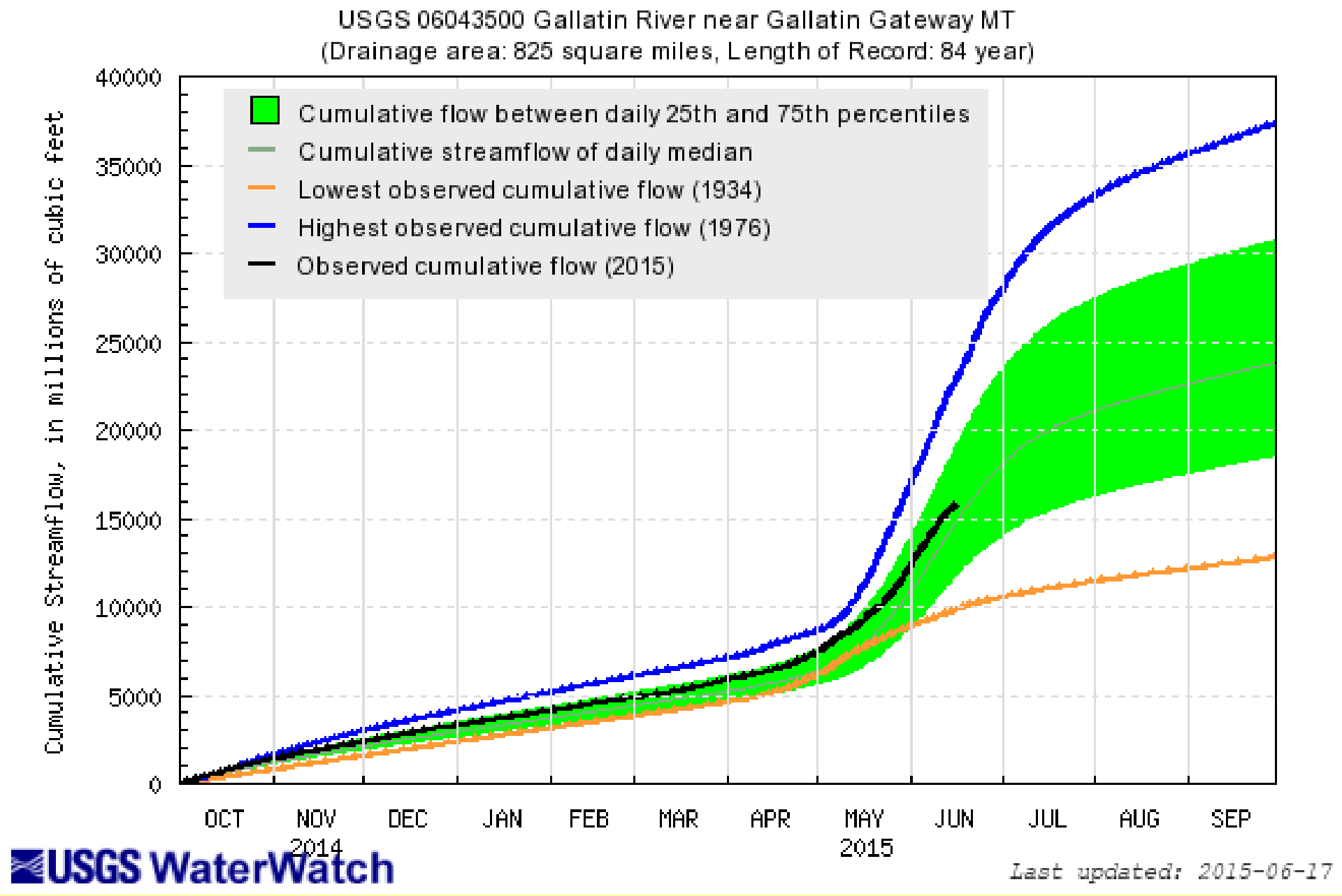
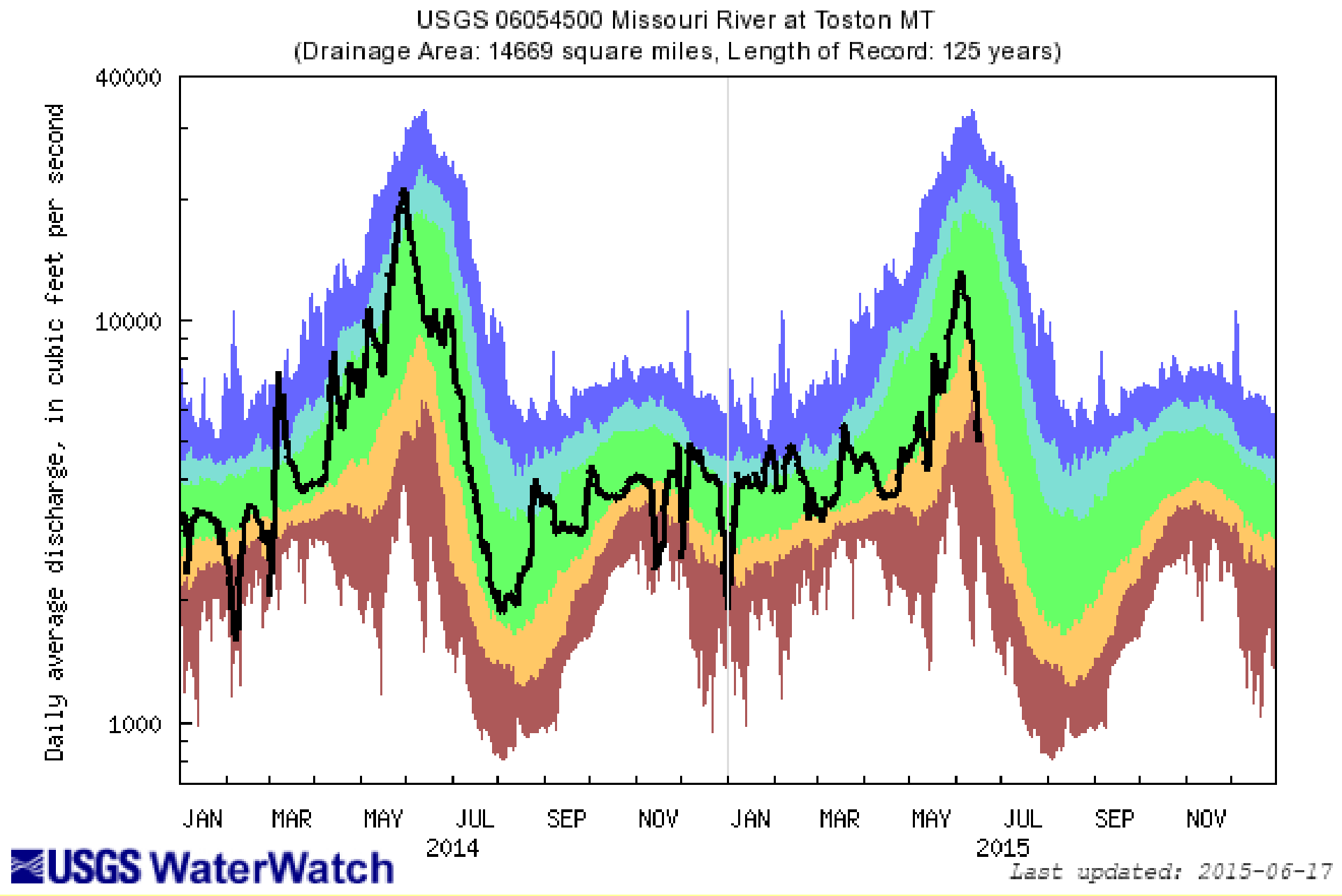
Below normal
Normal
Above normal
Much above normal


USGS 06043500 Gallatin River near Gallatin Gateway MT
(Drainage area: 825 square miles, Length of Record: 84 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1976)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
40000
35000
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 06054500 Missouri River at Toston MT
(Drainage Area: 14669 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
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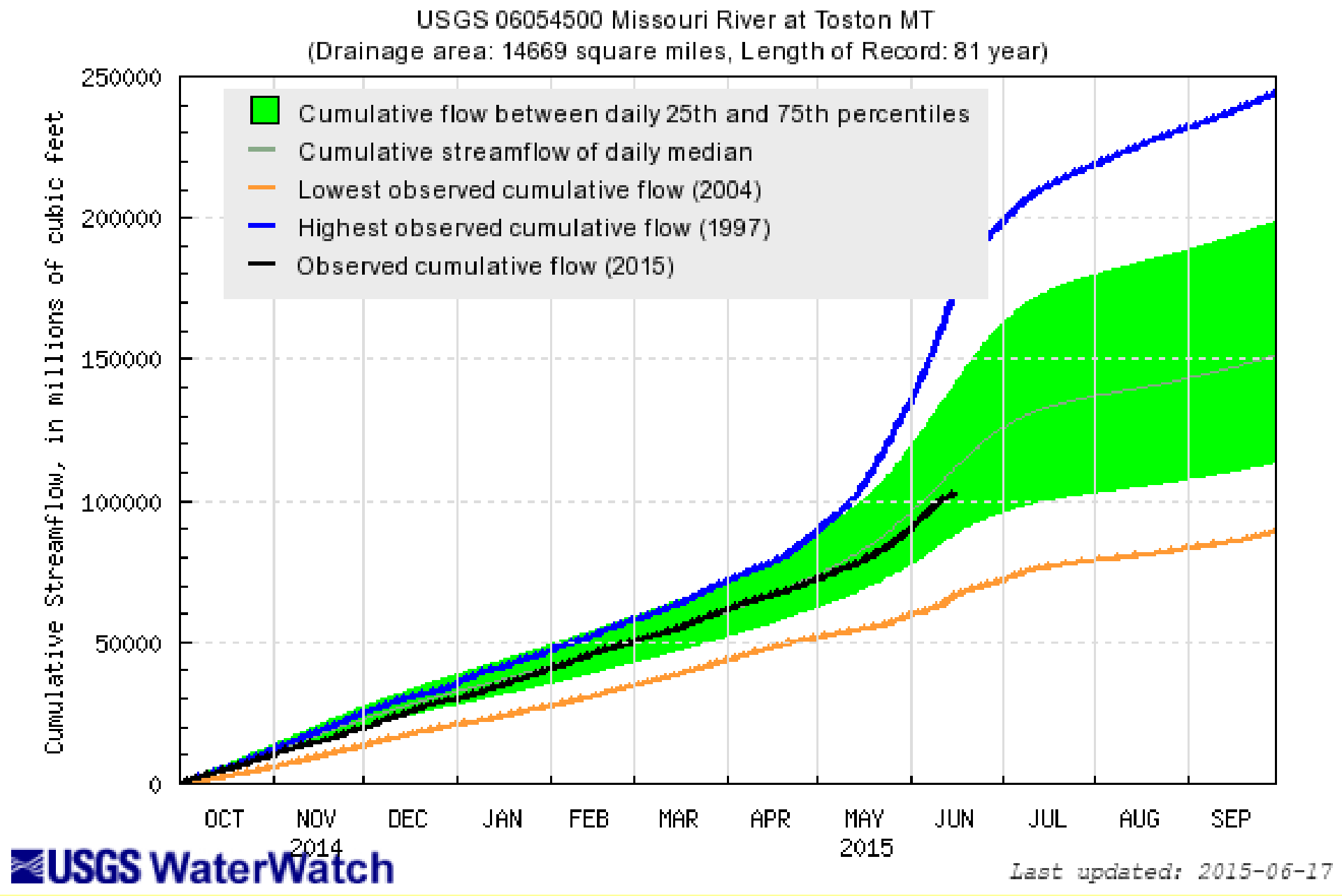
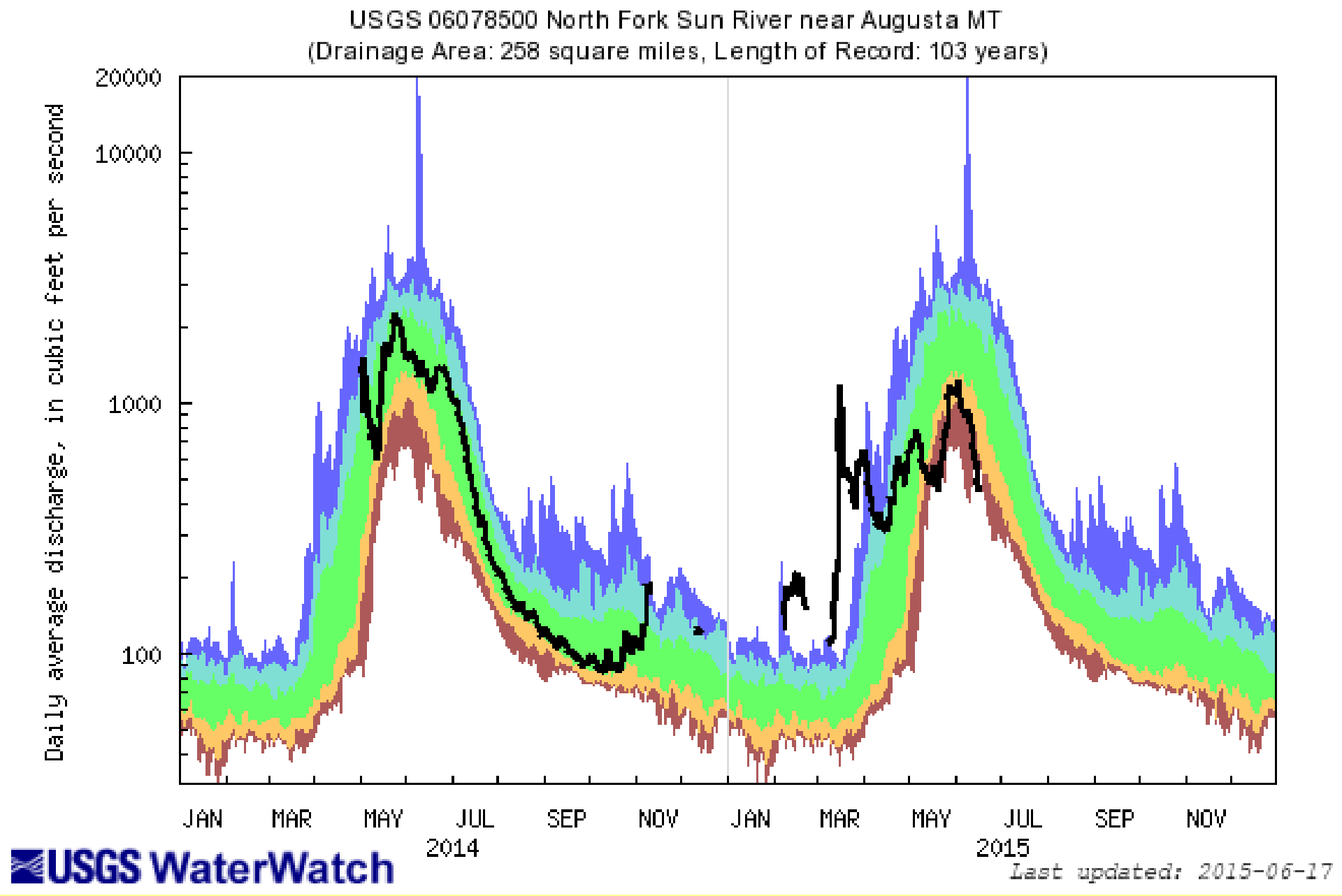
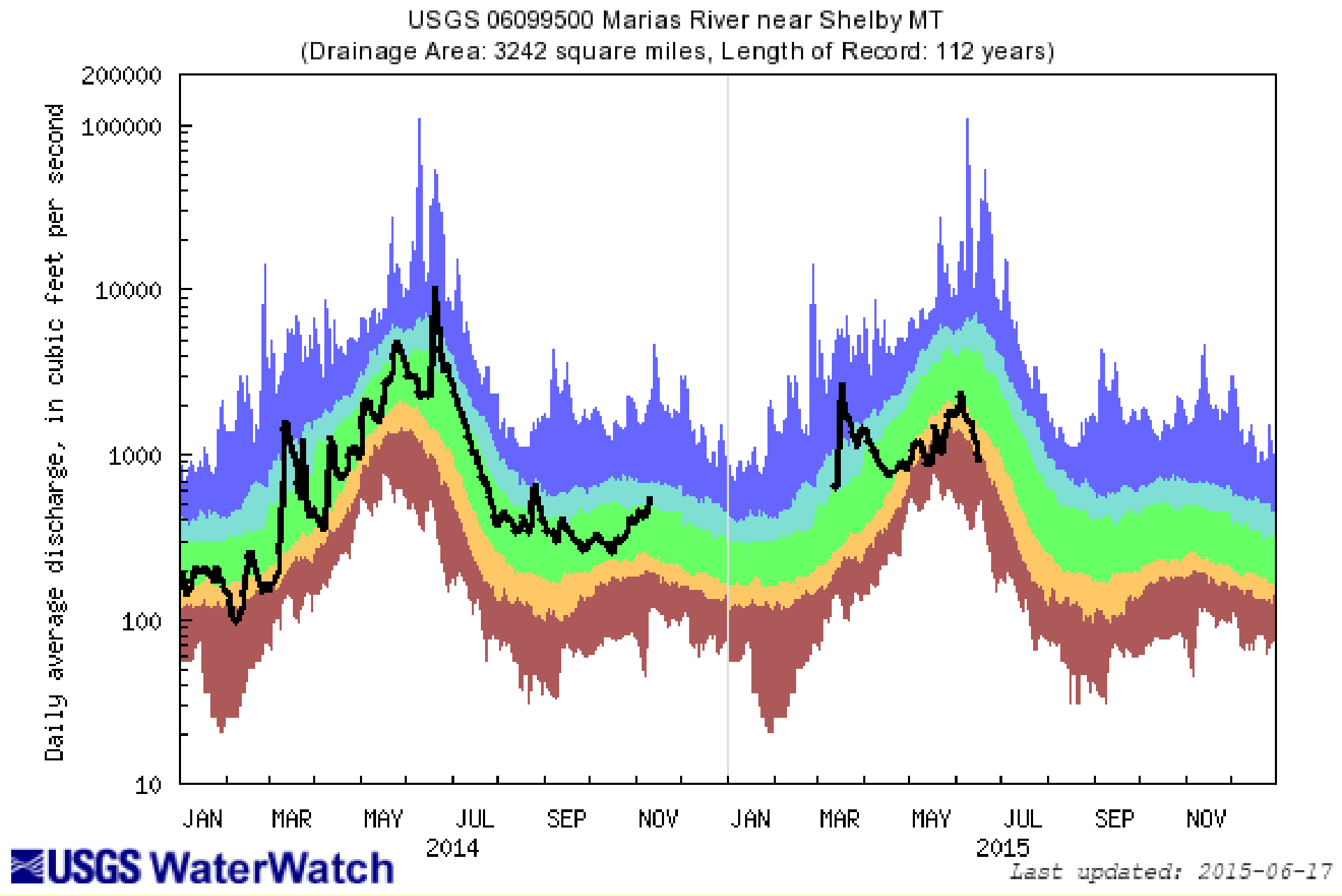
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

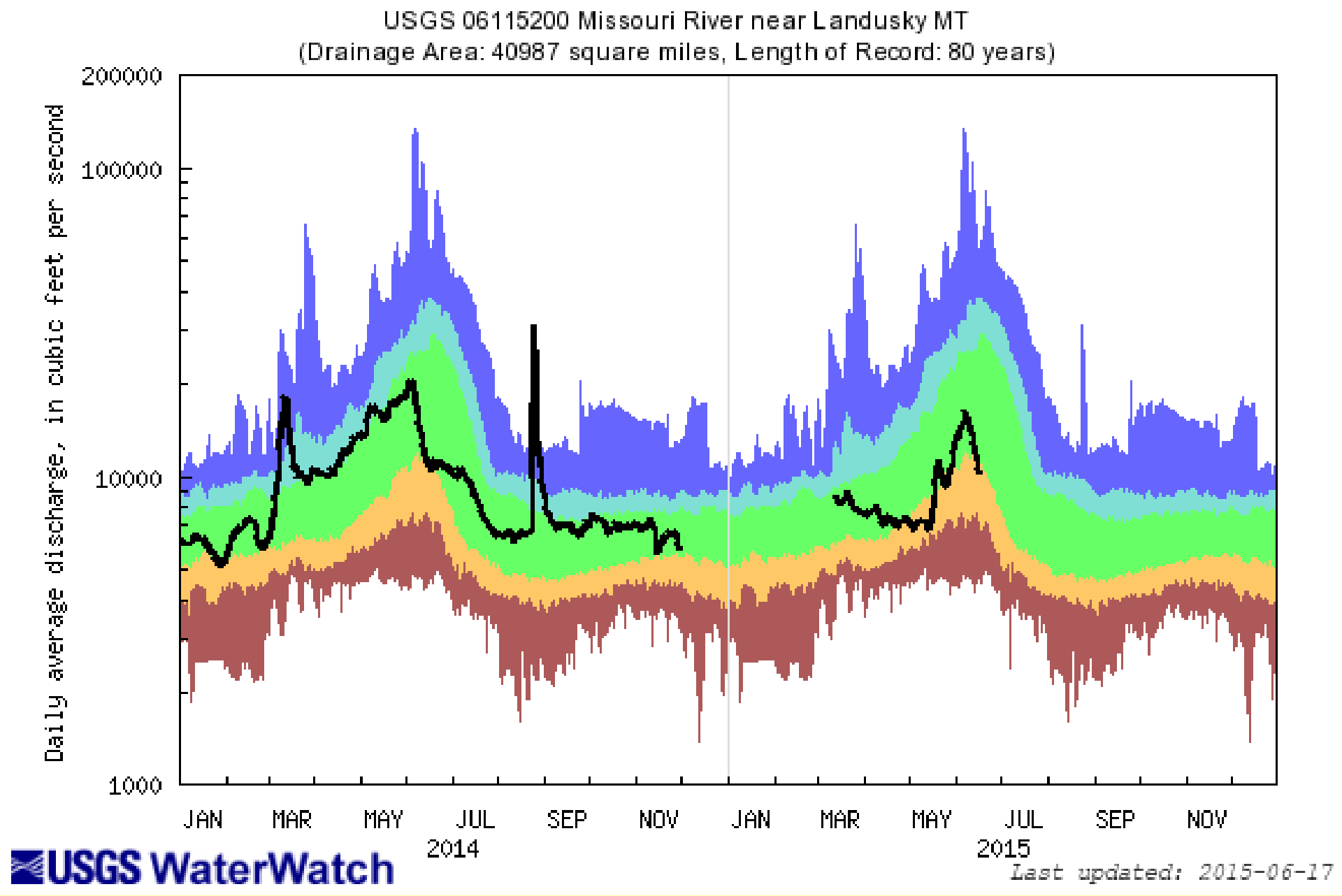


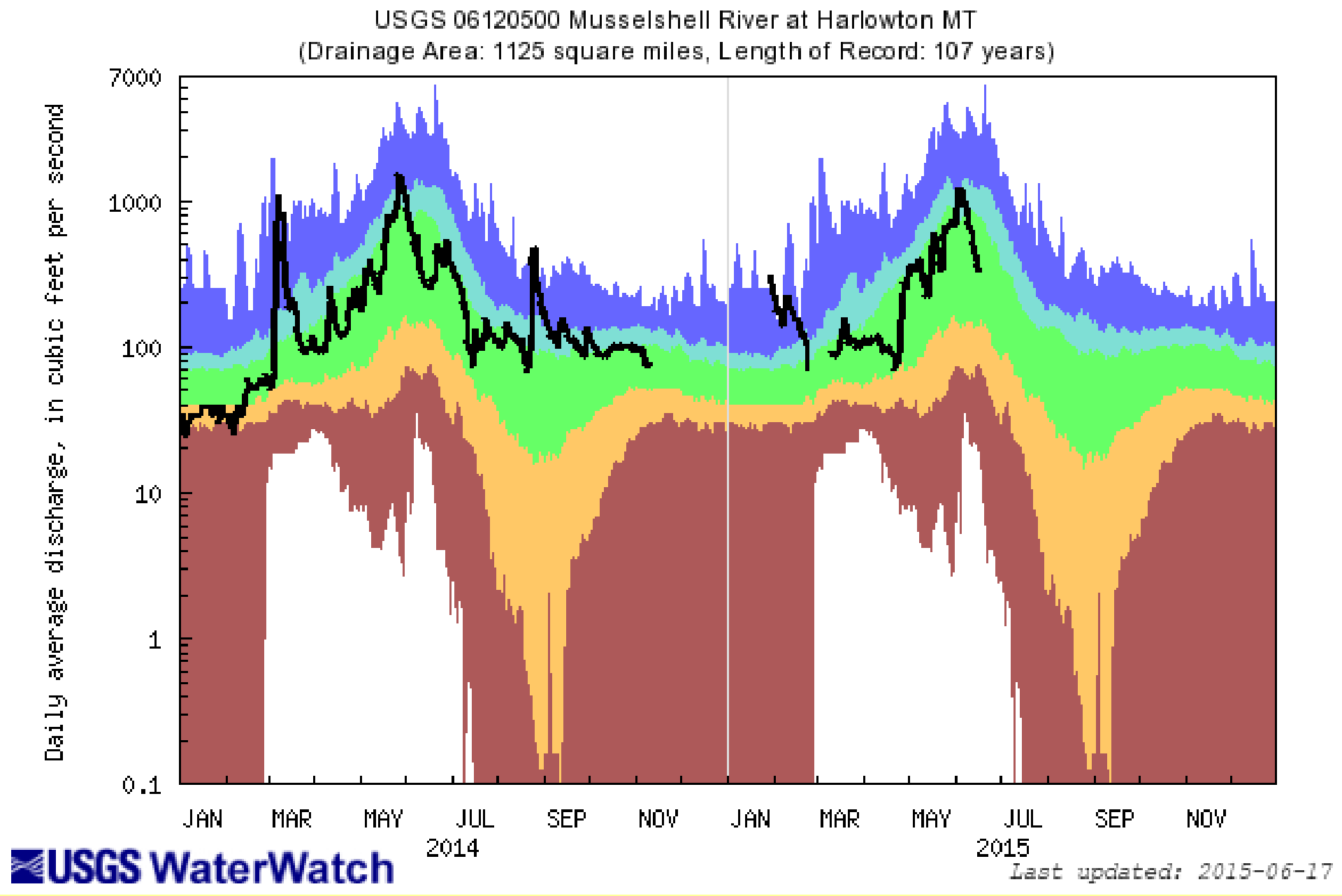
USGS WaterWatch

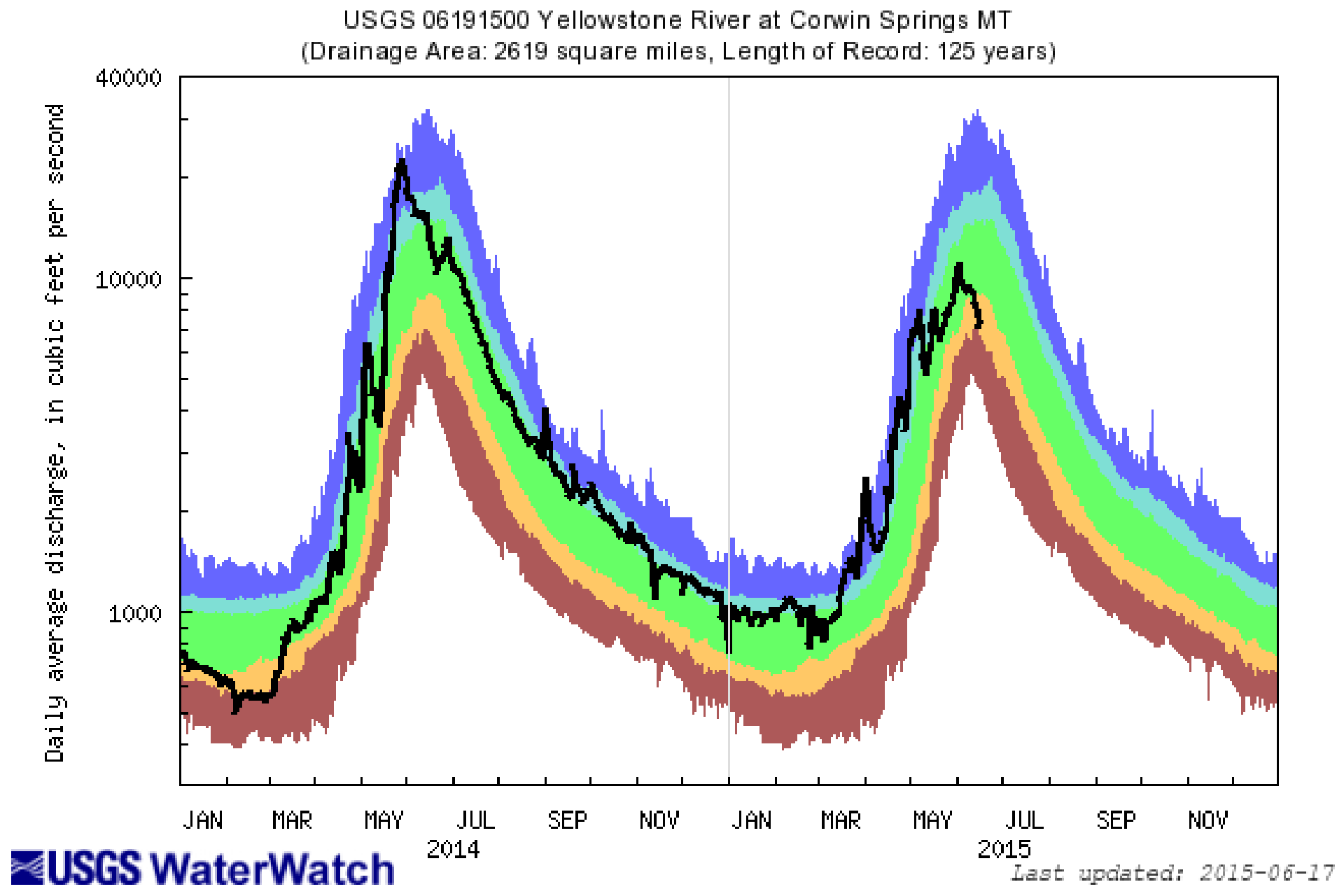
Last updated: 2015-06-17

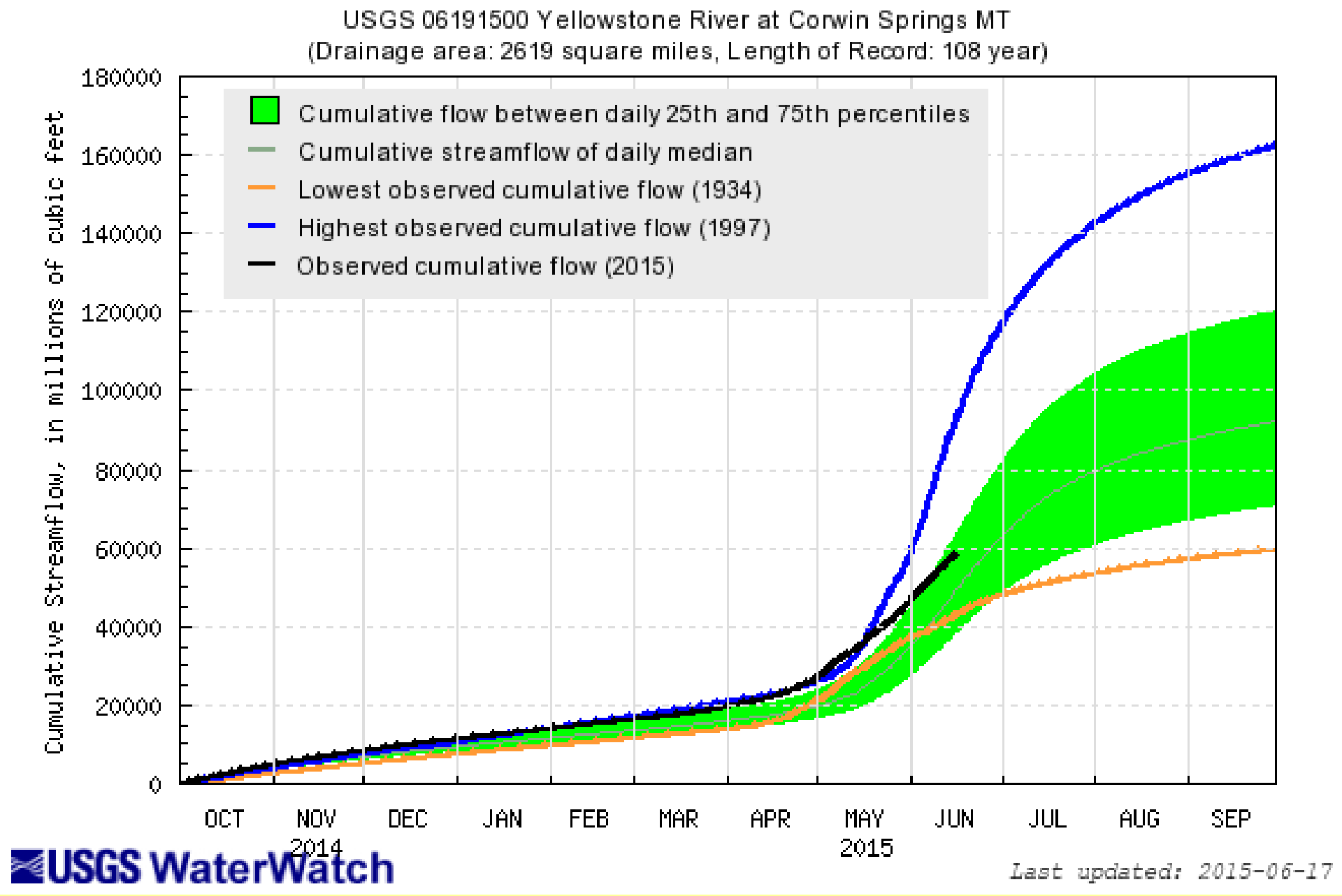

USGS 06078500 North Fork Sun River near Augusta MT
(Drainage Area: 258 square miles, Length of Record: 103 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

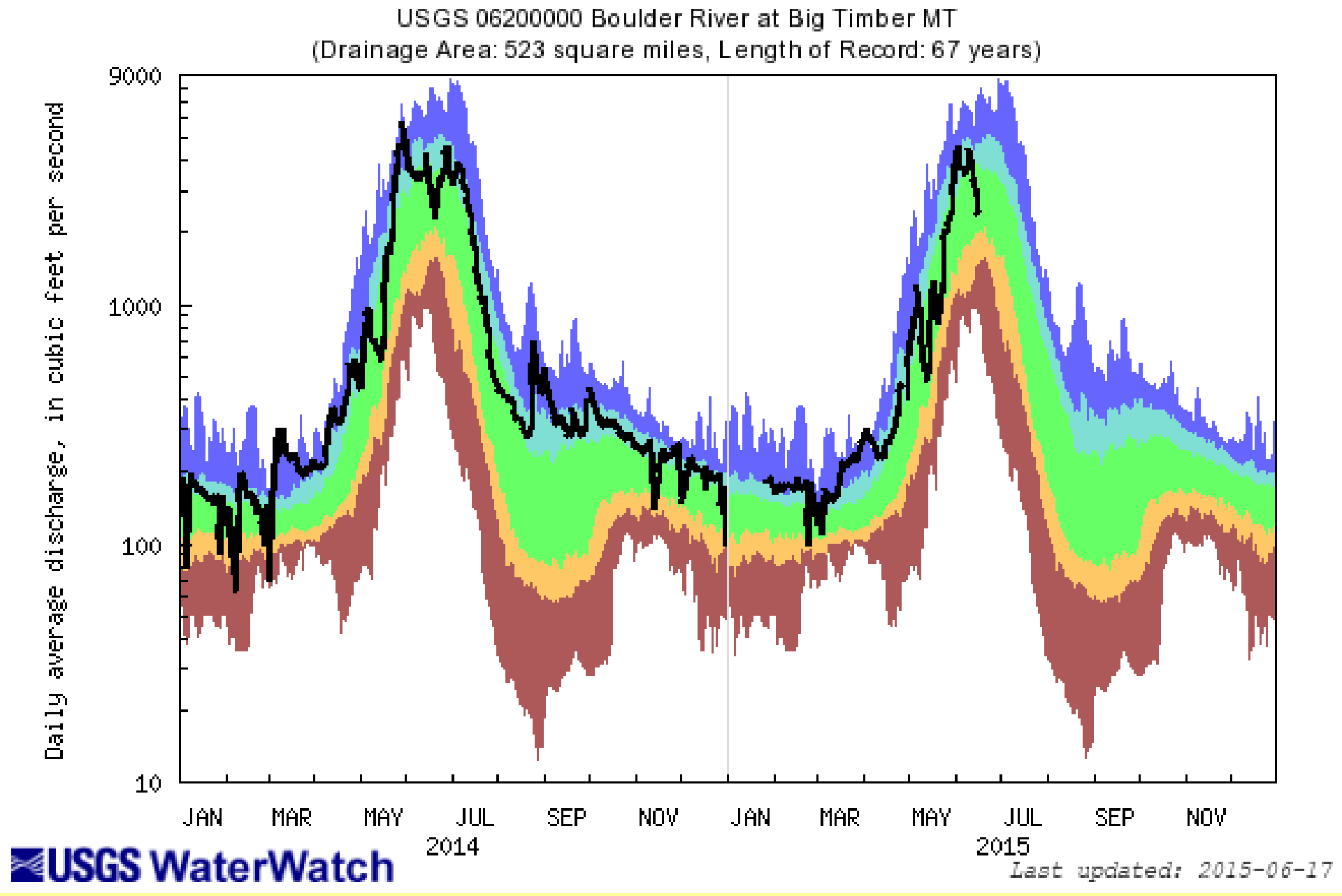

USGS 06099500 Marias River near Shelby MT
(Drainage Area: 3242 square miles, Length of Record: 112 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

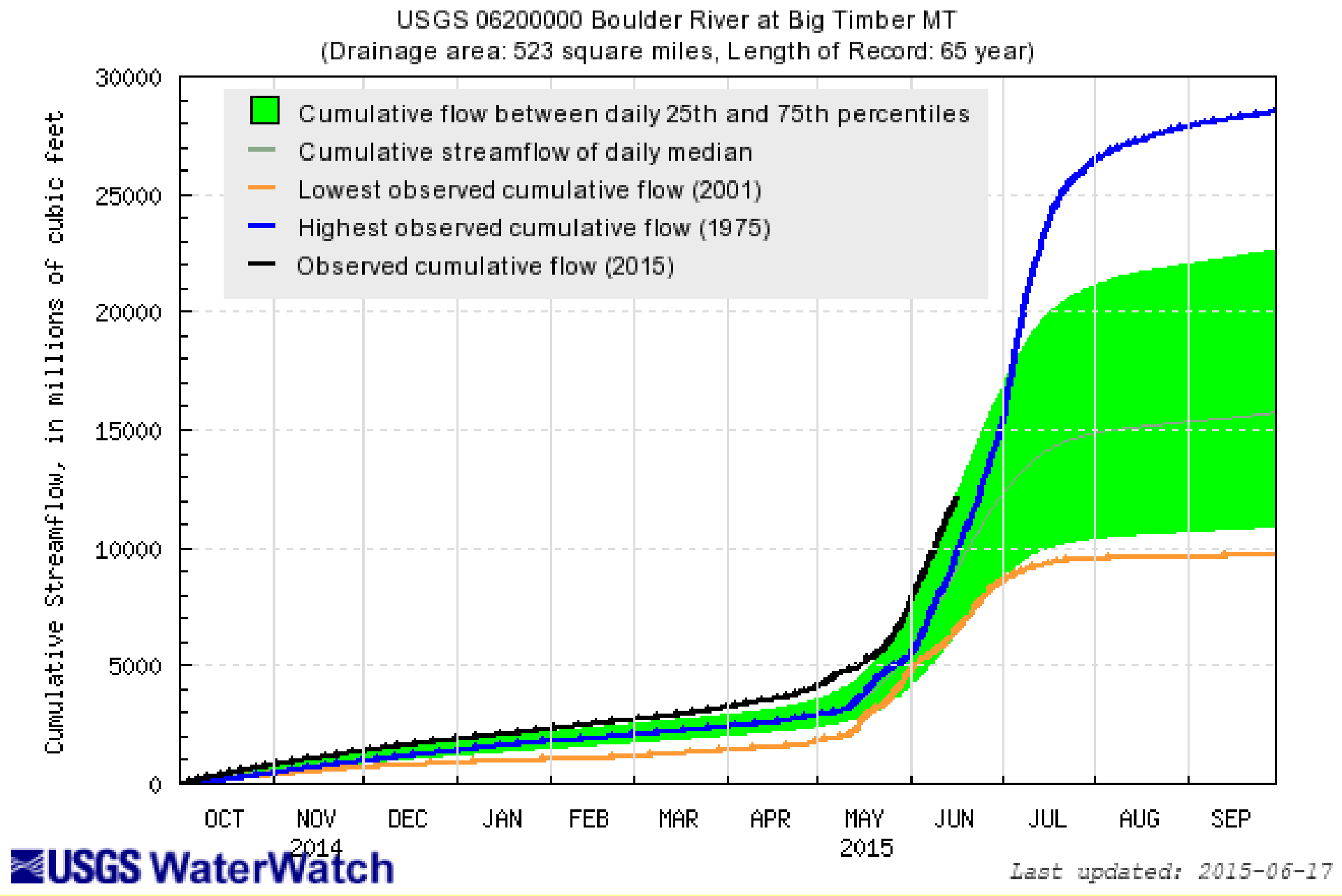

USGS 06115200 Missouri River near Landusky MT
(Drainage Area: 40987 square miles, Length of Record: 80 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06120500 Musselshell River at Harlowton MT
(Drainage Area: 1125 square miles, Length of Record: 107 years)
Daily average discharge, in cubic feet per second
7000
1000
100
10
1
0.1
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06191500 Yellowstone River at Corwin Springs MT
(Drainage Area: 2619 square miles, Length of Record: 125 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06191500 Yellowstone River at Corwin Springs MT
(Drainage area: 2619 square miles, Length of Record: 108 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1934)
Highest observed cumulative flow (1997)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 06200000 Boulder River at Big Timber MT
(Drainage Area: 523 square miles, Length of Record: 67 years)
Daily average discharge, in cubic feet per second
9000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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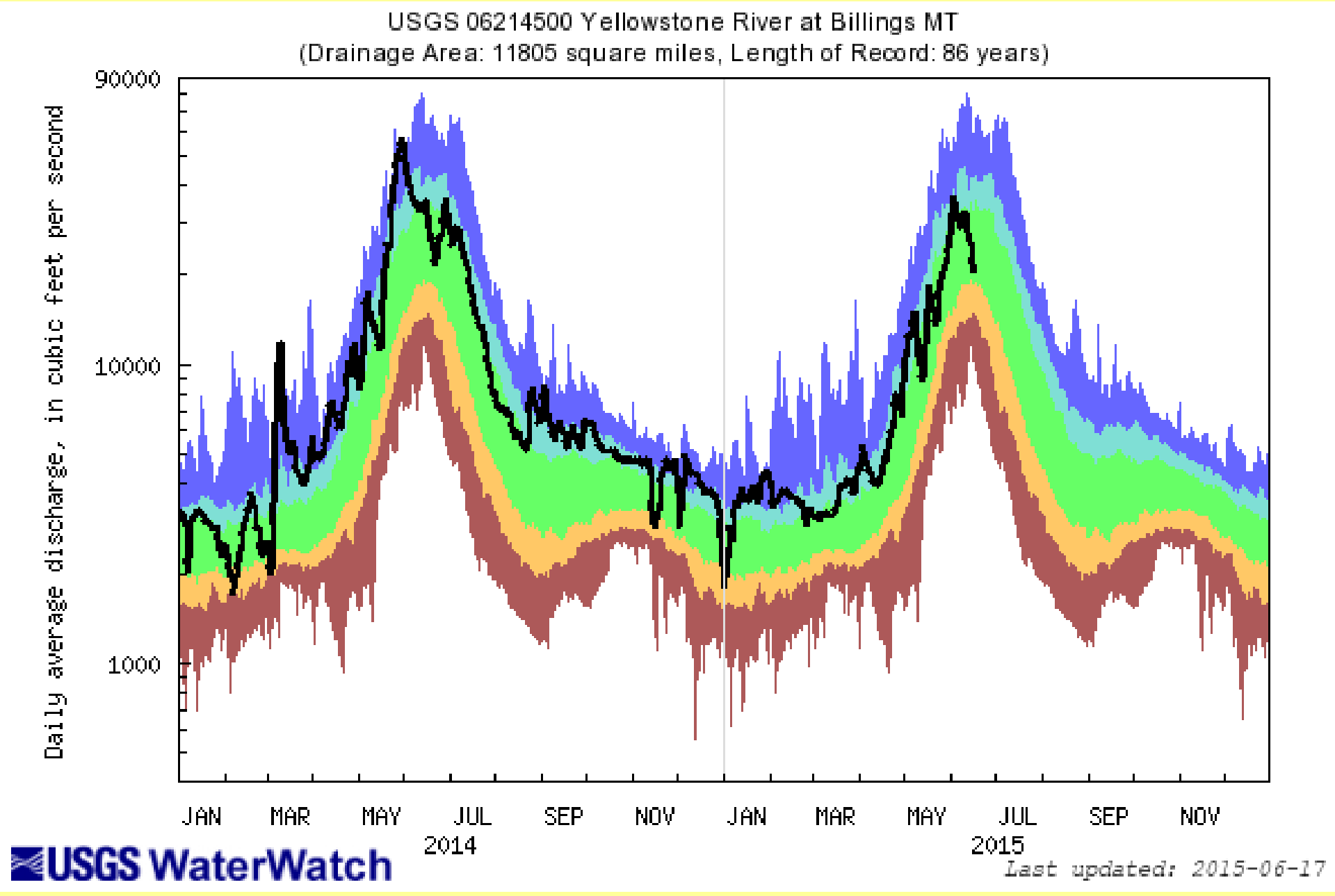
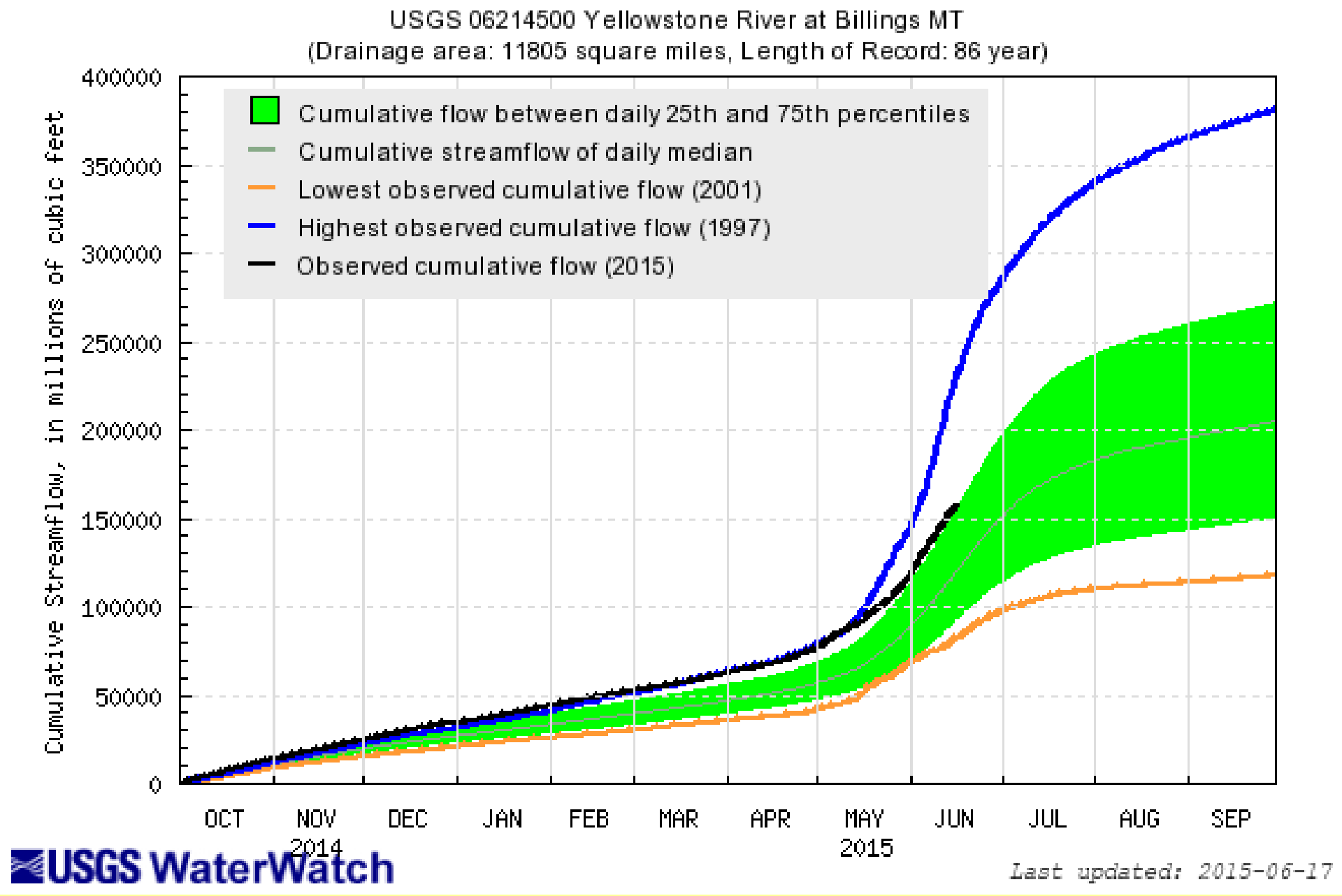

USGS 06214500 Yellowstone River at Billings MT
(Drainage Area: 11805 square miles, Length of Record: 86 years)
Daily average discharge, in cubic feet per second
90000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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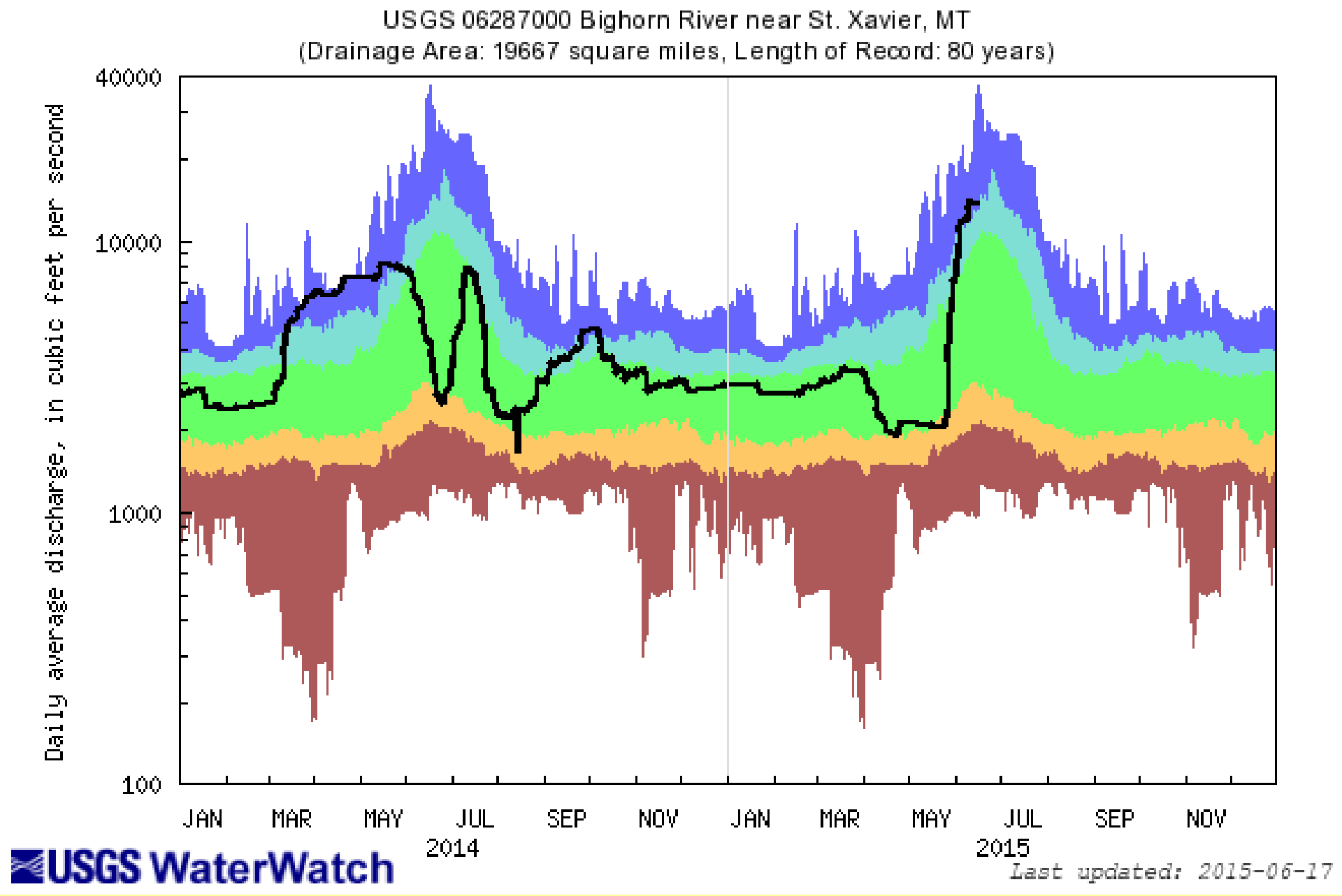
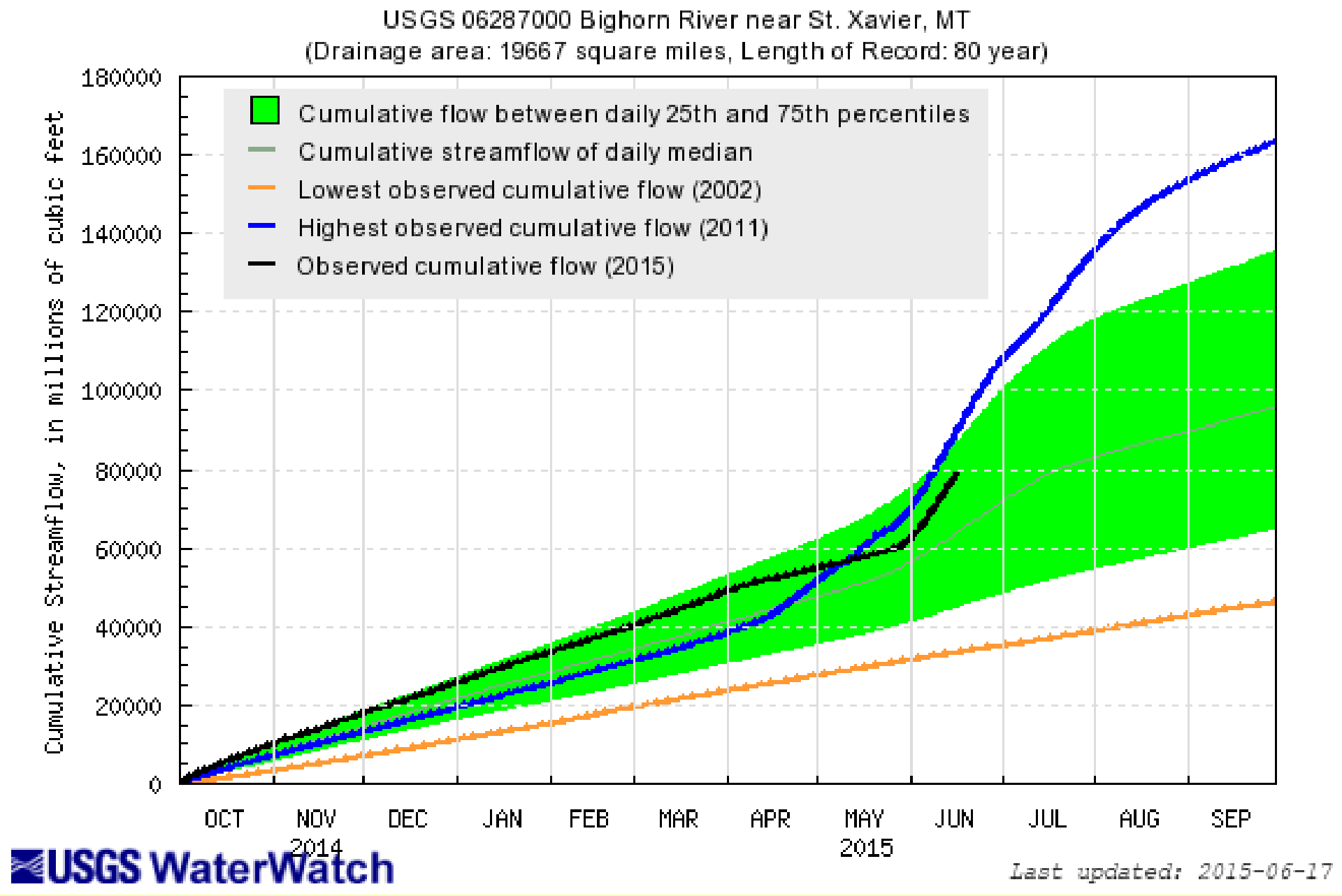

USGS 06287000 Bighorn River near St. Xavier, MT
(Drainage Area: 19667 square miles, Length of Record: 80 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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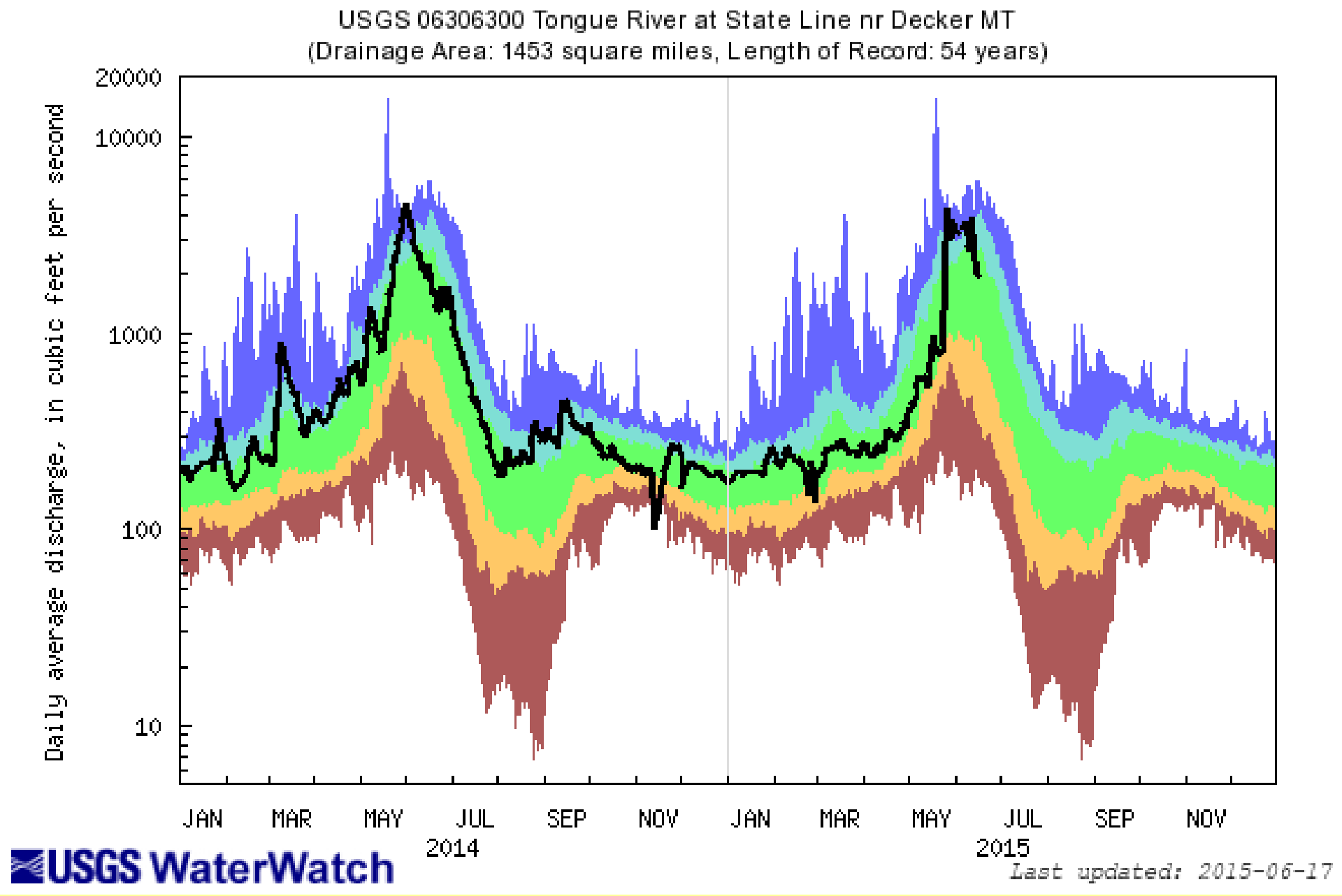
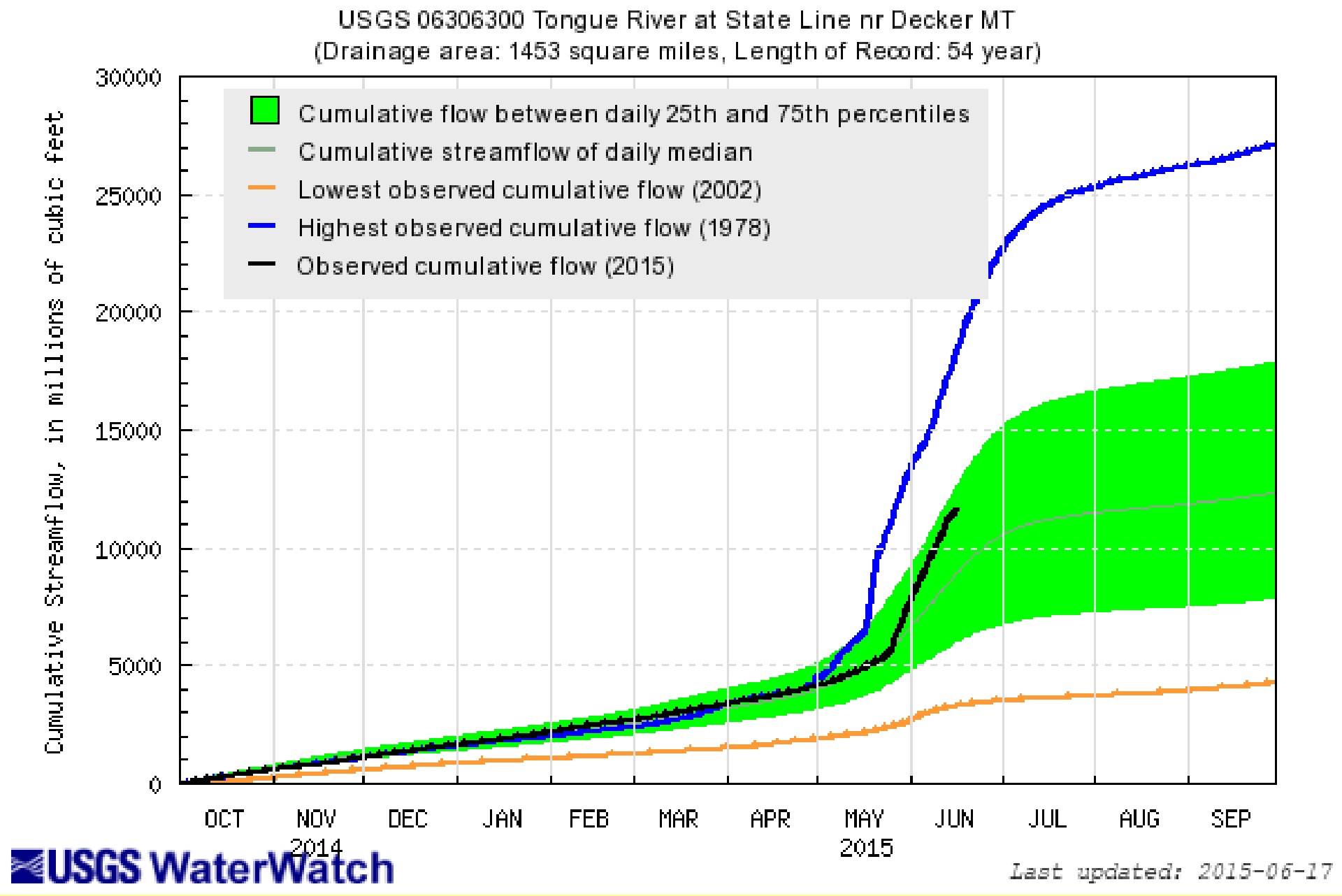
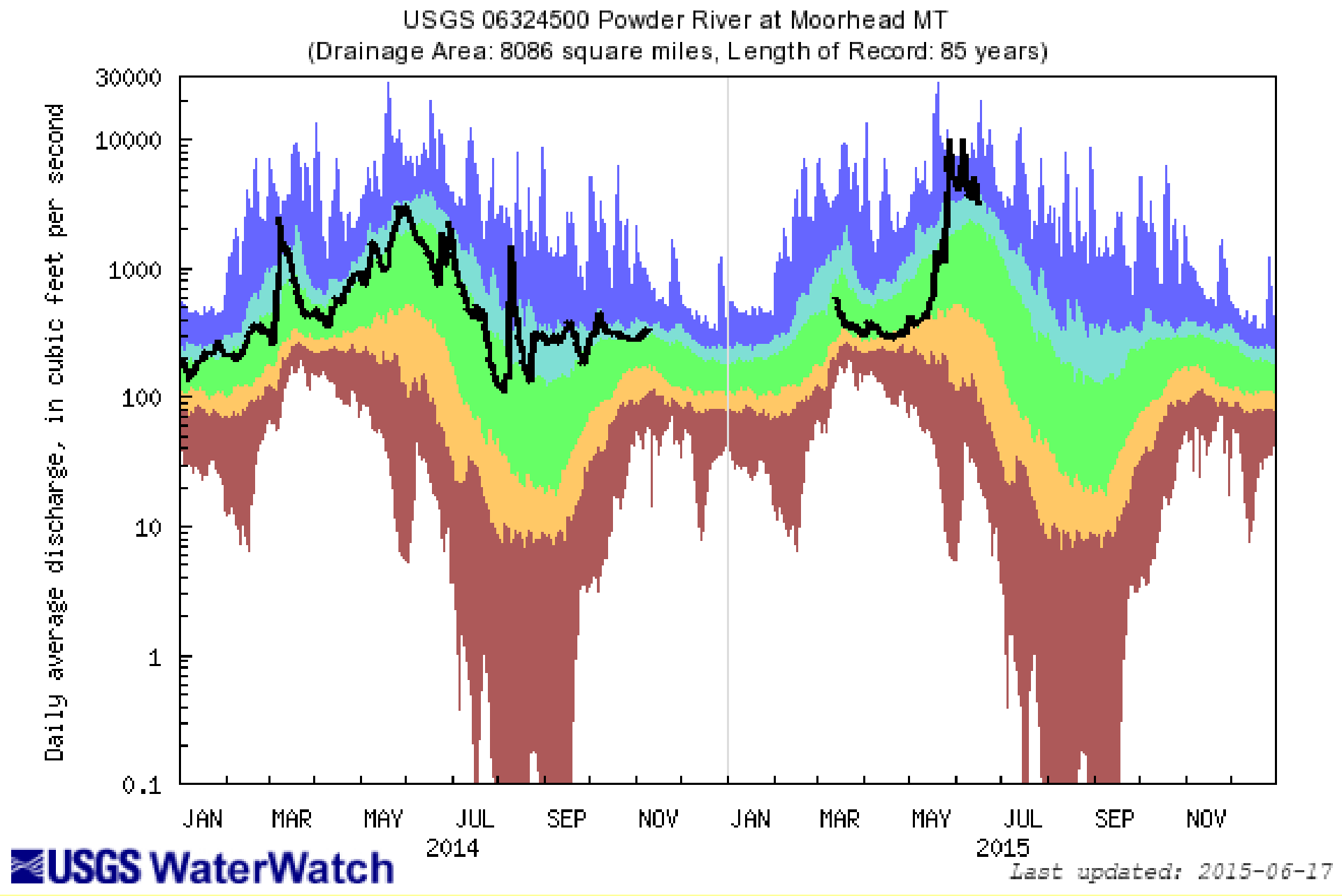
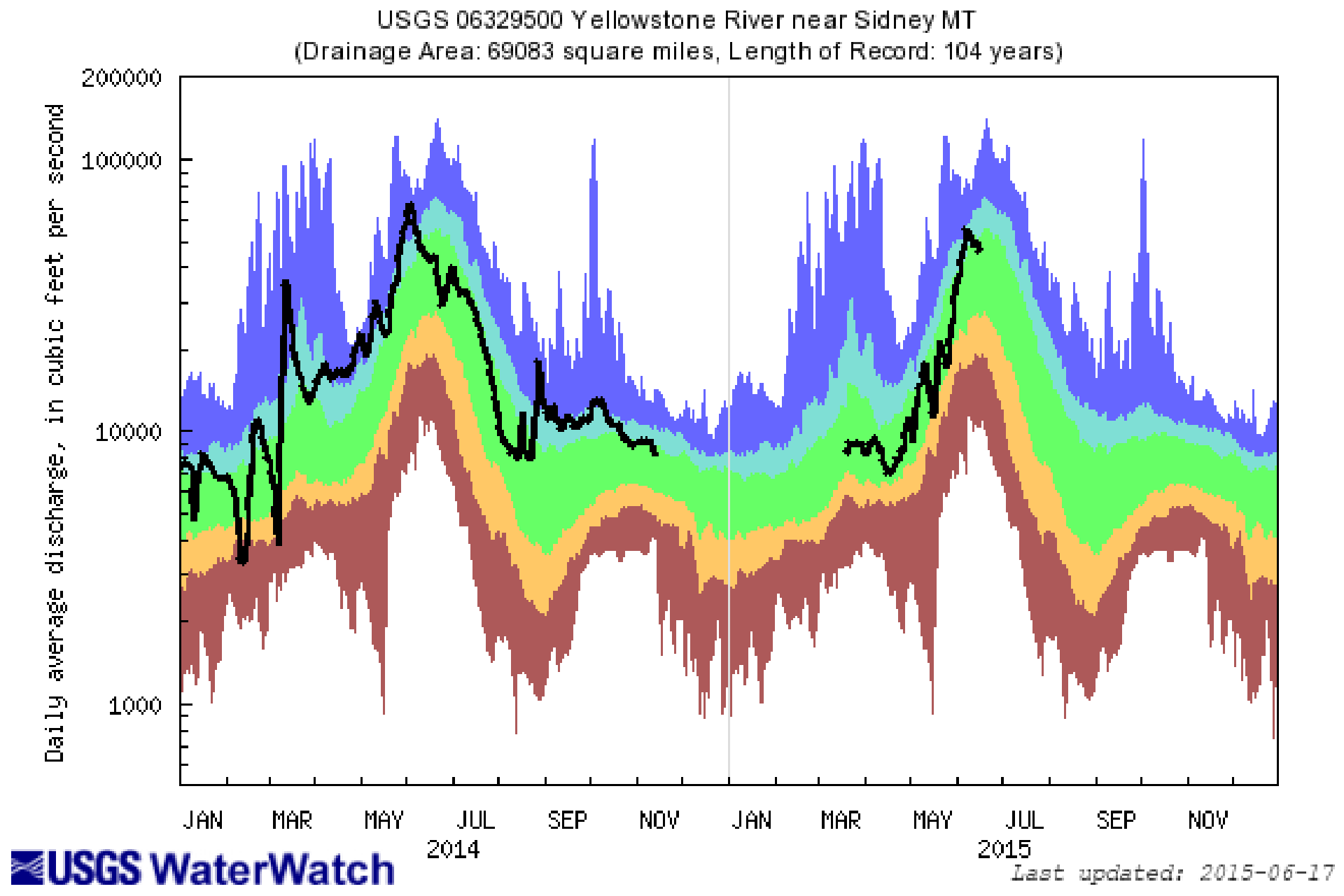
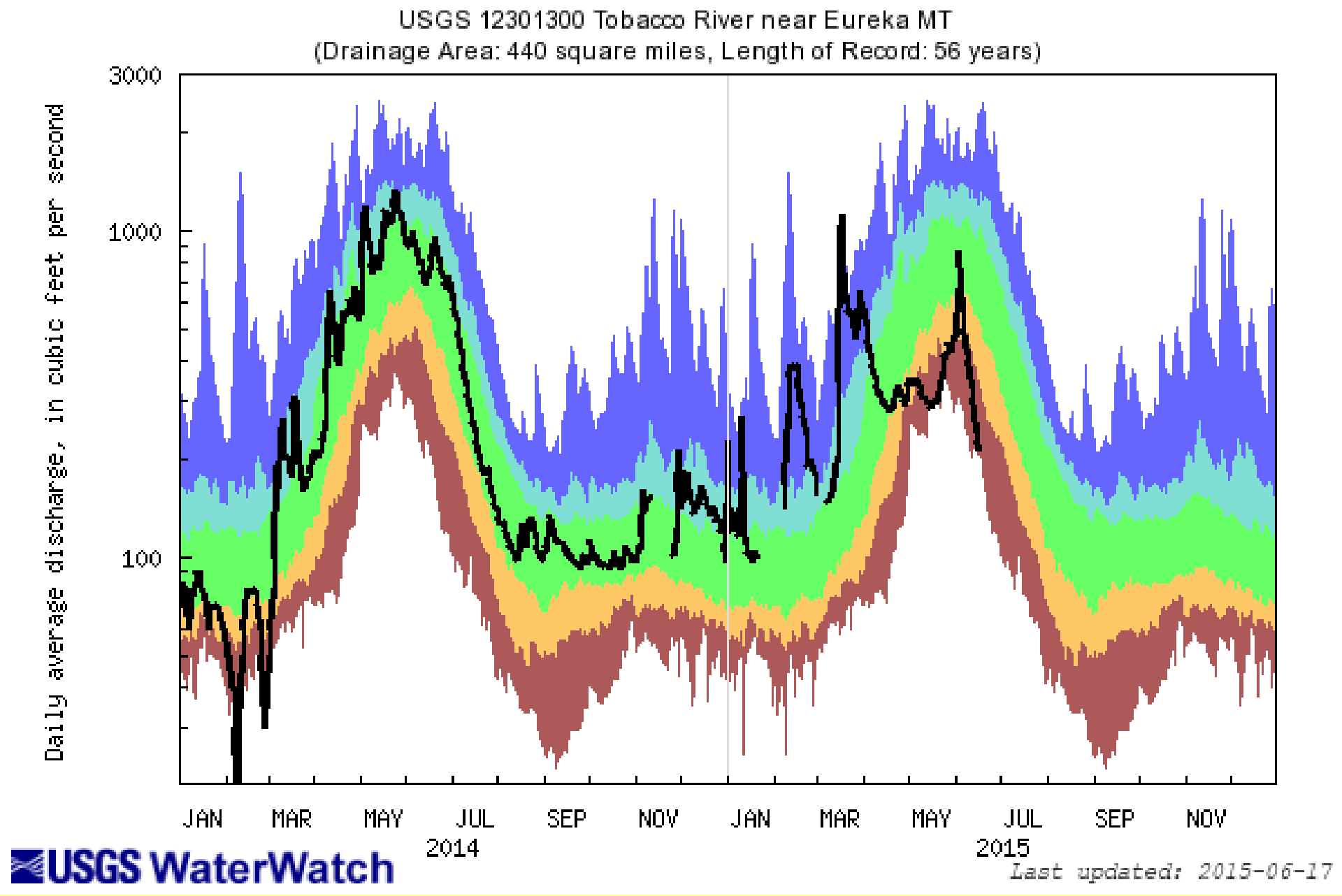
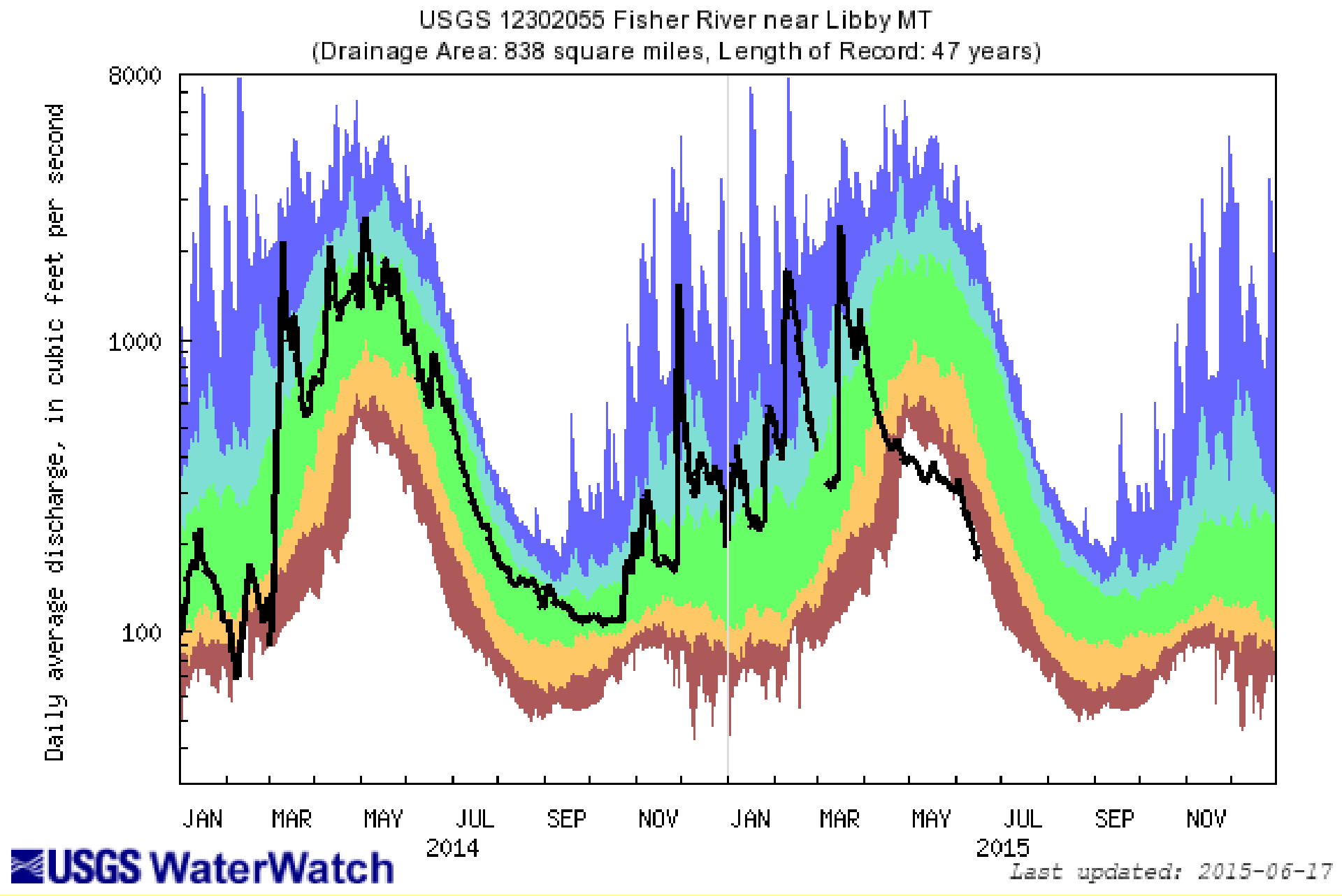

USGS 06306300 Tongue River at State Line nr Decker MT
(Drainage Area: 1453 square miles, Length of Record: 54 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
10
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

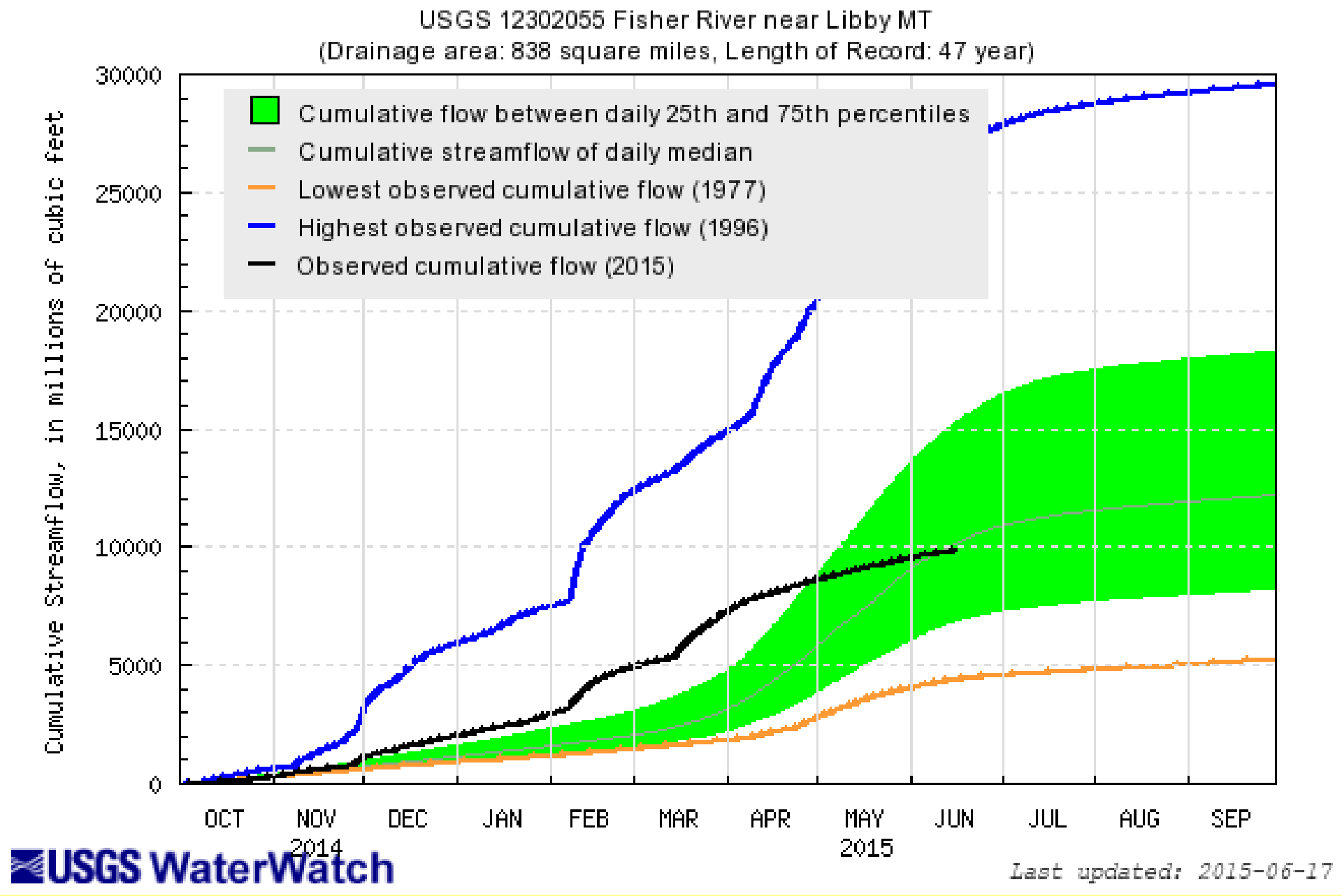

USGS 06306300 Tongue River at State Line nr Decker MT
(Drainage area: 1453 square miles, Length of Record: 54 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (2002)
Highest observed cumulative flow (1978)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 06324500 Powder River at Moorhead MT
(Drainage Area: 8086 square miles, Length of Record: 85 years)
Daily average discharge, in cubic feet per second
30000
10000
1000
100
10
1
0.1
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 06329500 Yellowstone River near Sidney MT
(Drainage Area: 69083 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12301300 Tobacco River near Eureka MT
(Drainage Area: 440 square miles, Length of Record: 56 years)
Daily average discharge, in cubic feet per second
3000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12302055 Fisher River near Libby MT
(Drainage Area: 838 square miles, Length of Record: 47 years)
Daily average discharge, in cubic feet per second
8000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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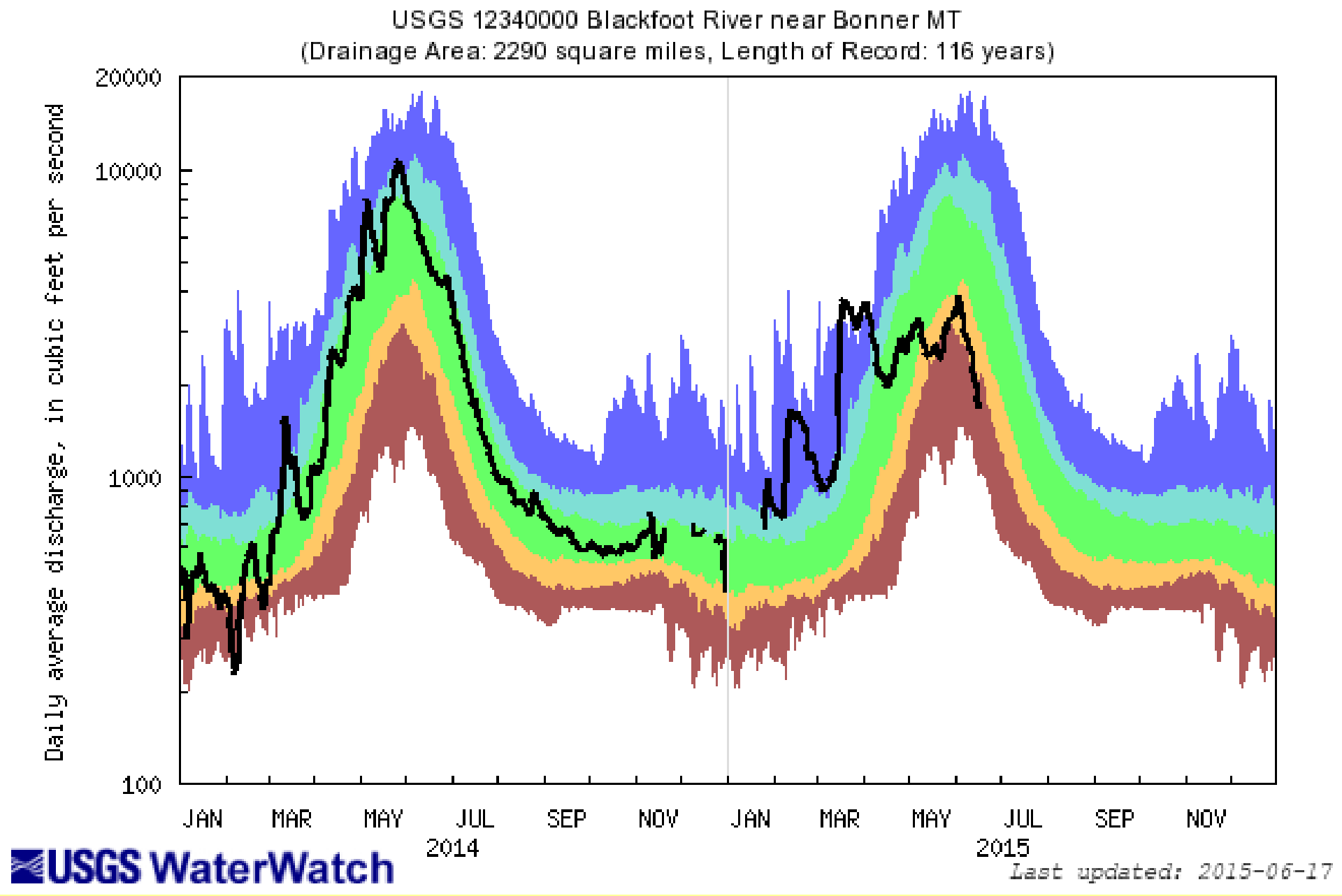
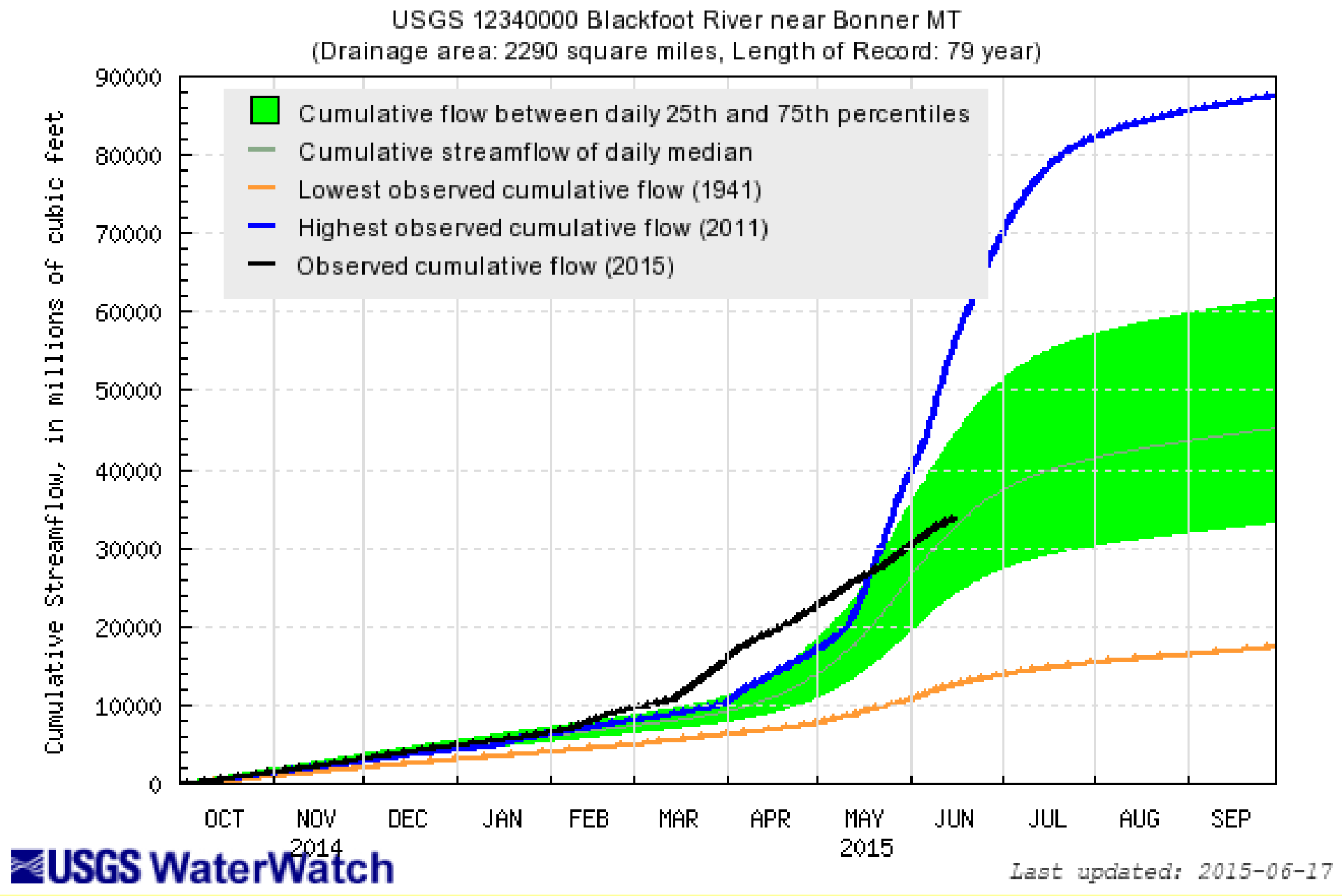
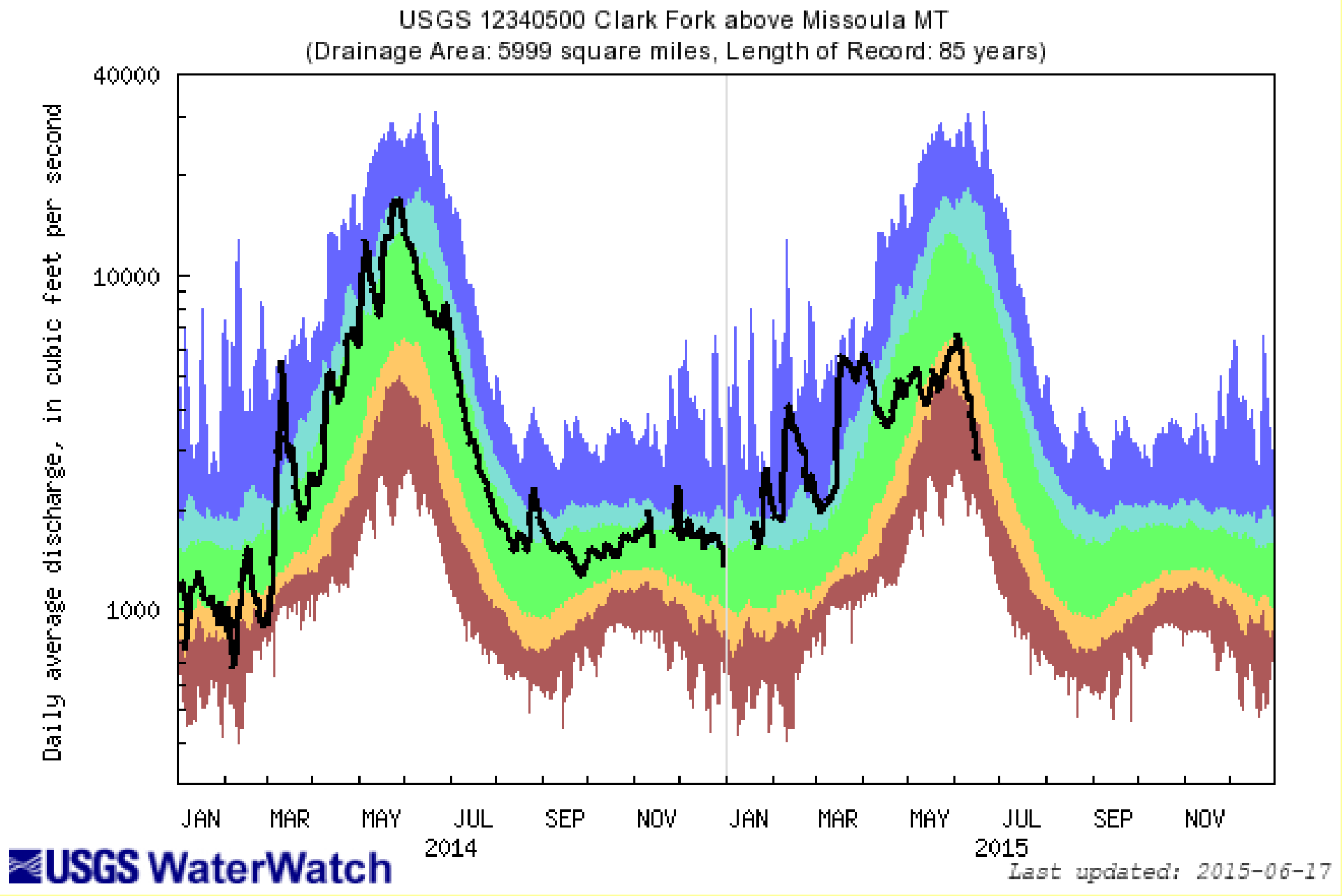
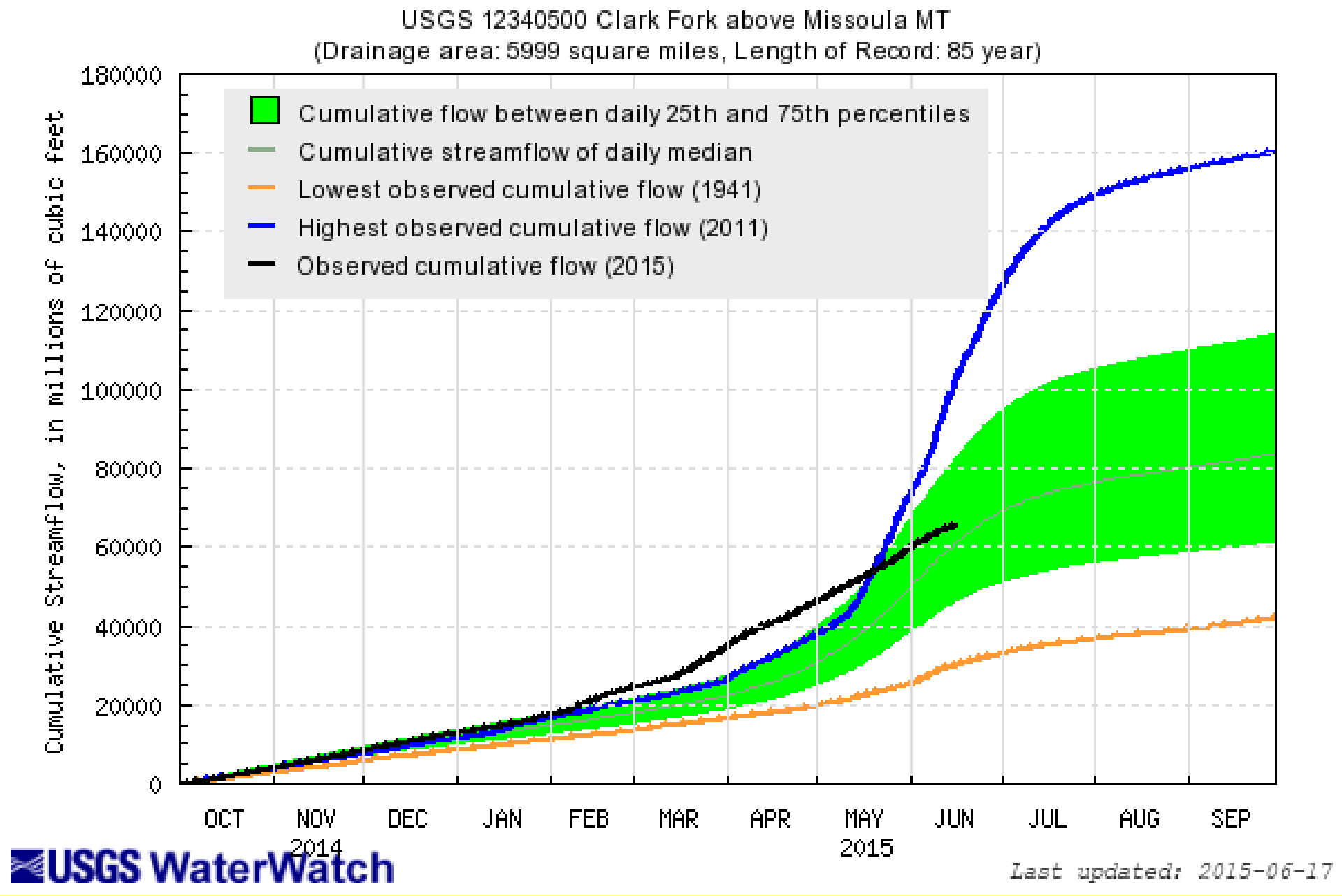

USGS 12340000 Blackfoot River near Bonner MT
(Drainage Area: 2290 square miles, Length of Record: 116 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12340000 Blackfoot River near Bonner MT
(Drainage area: 2290 square miles, Length of Record: 79 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1941)
Highest observed cumulative flow (2011)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
90000
80000
70000
60000
50000
40000
30000
20000
10000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 12340500 Clark Fork above Missoula MT
(Drainage Area: 5999 square miles, Length of Record: 85 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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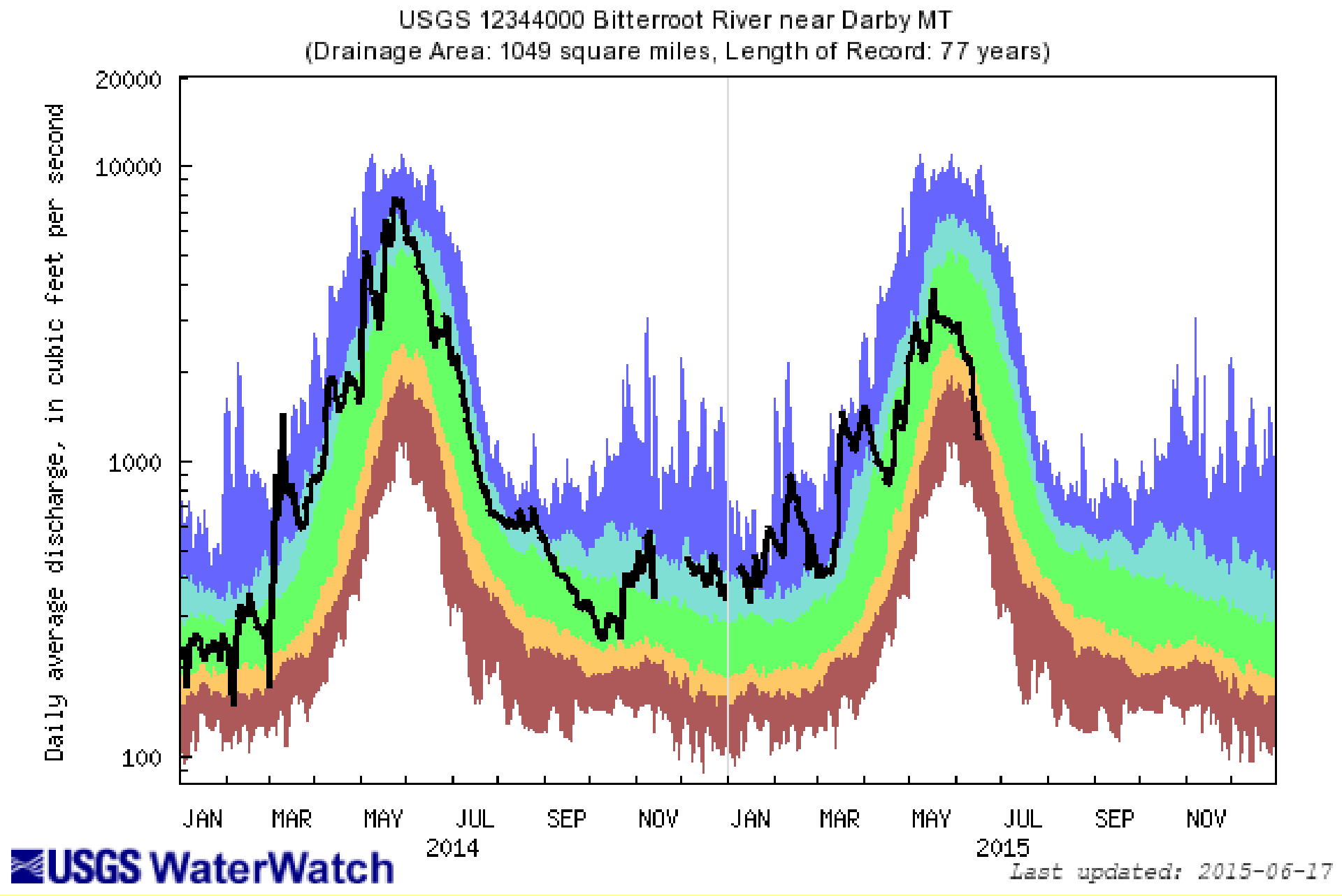
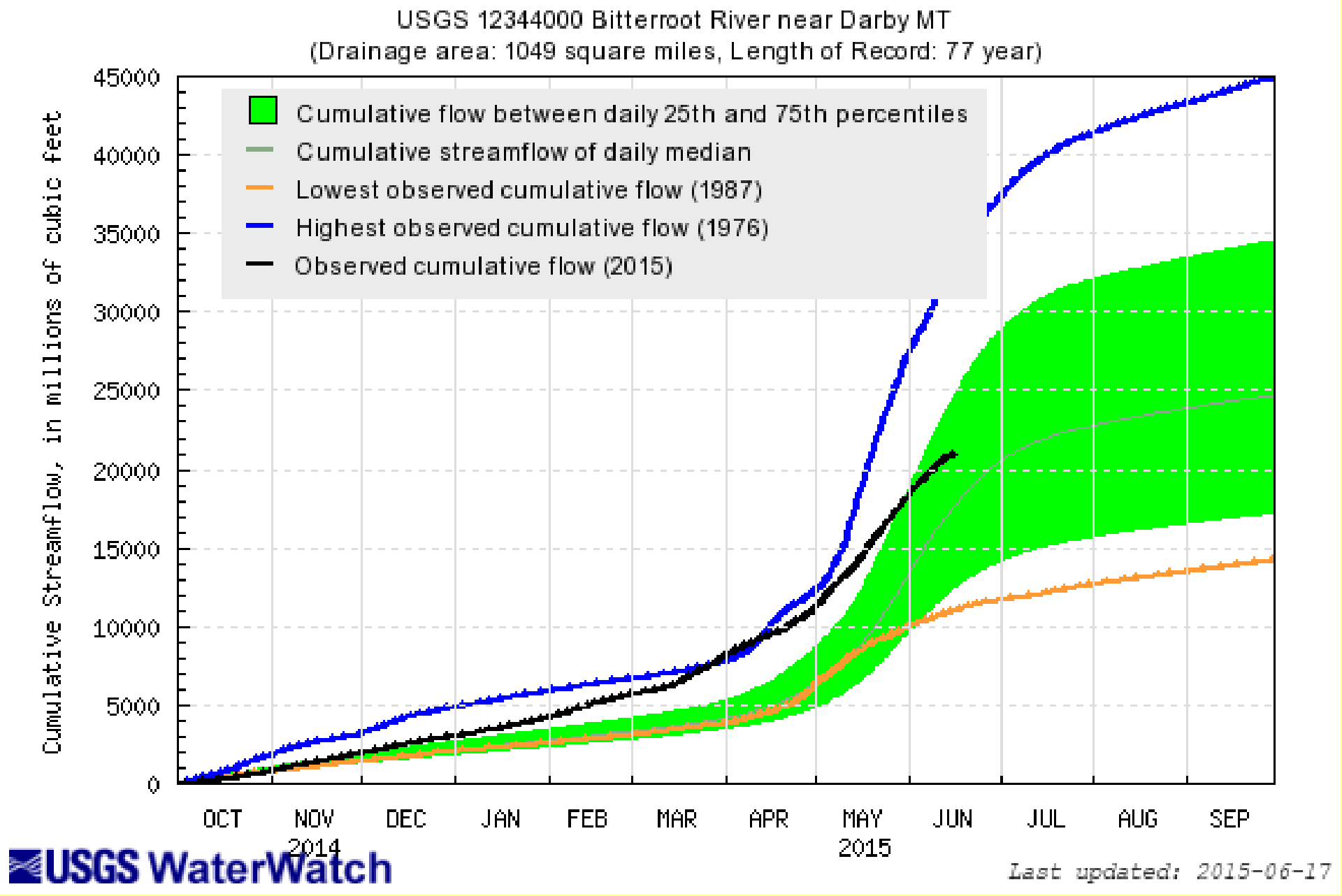
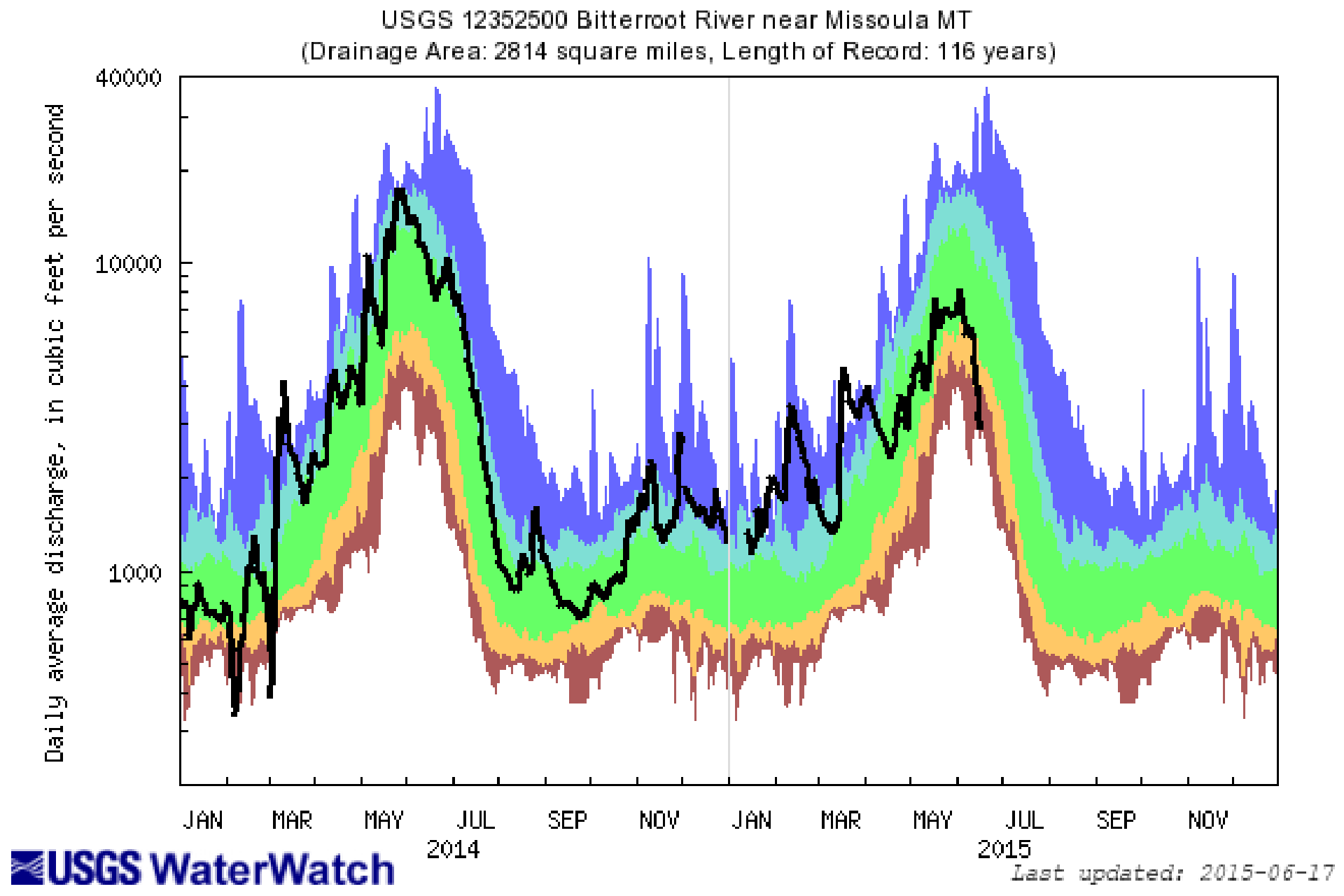
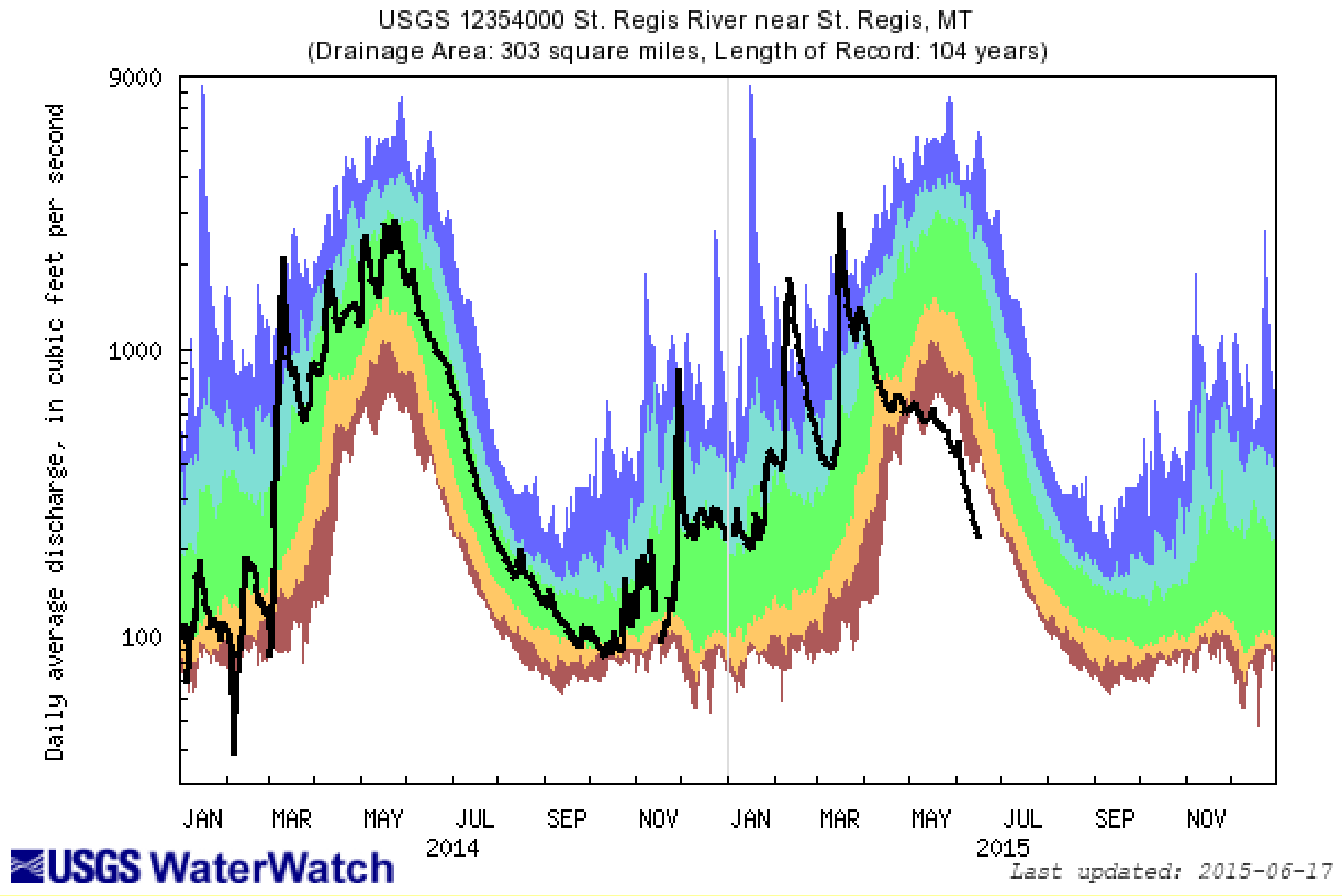
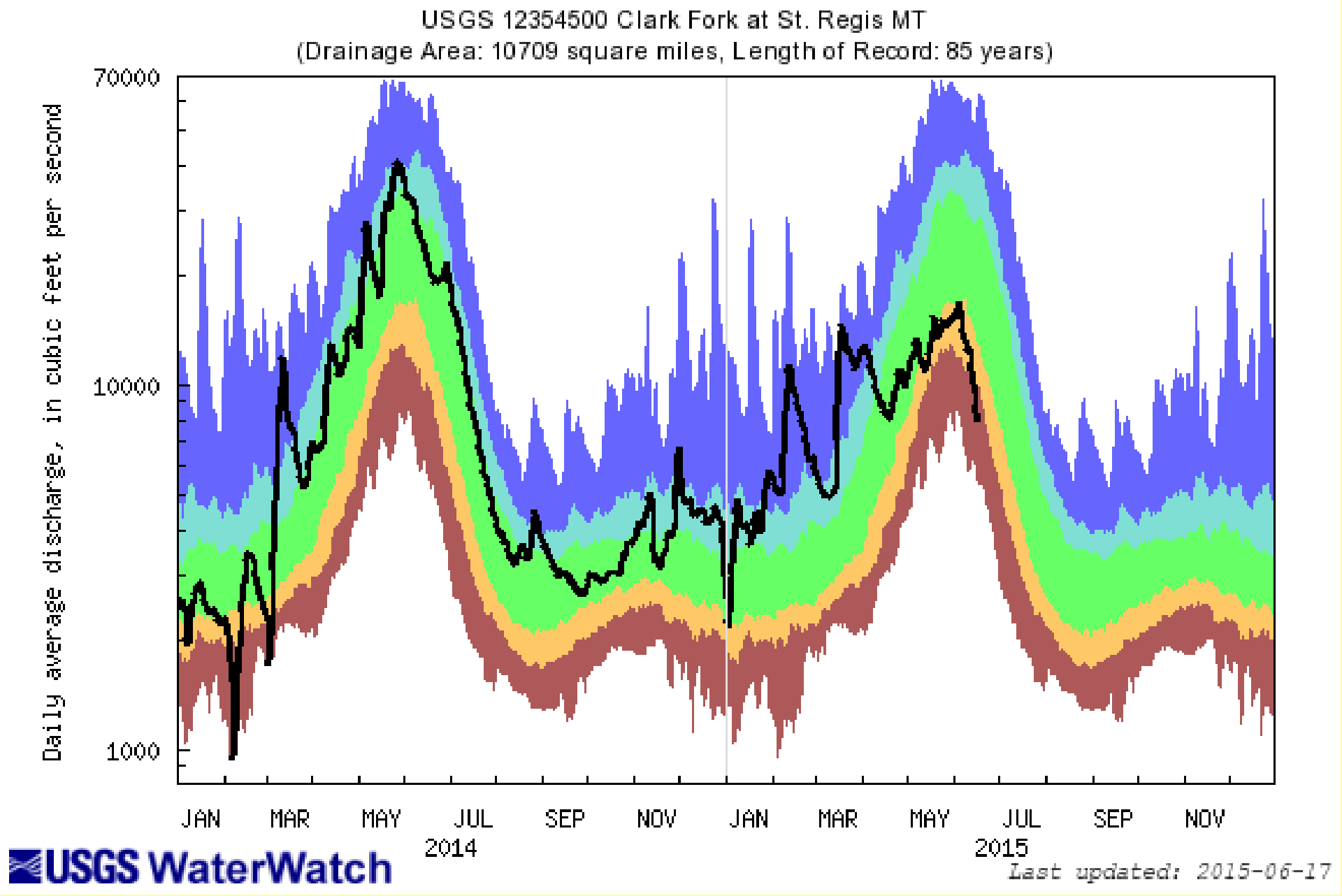
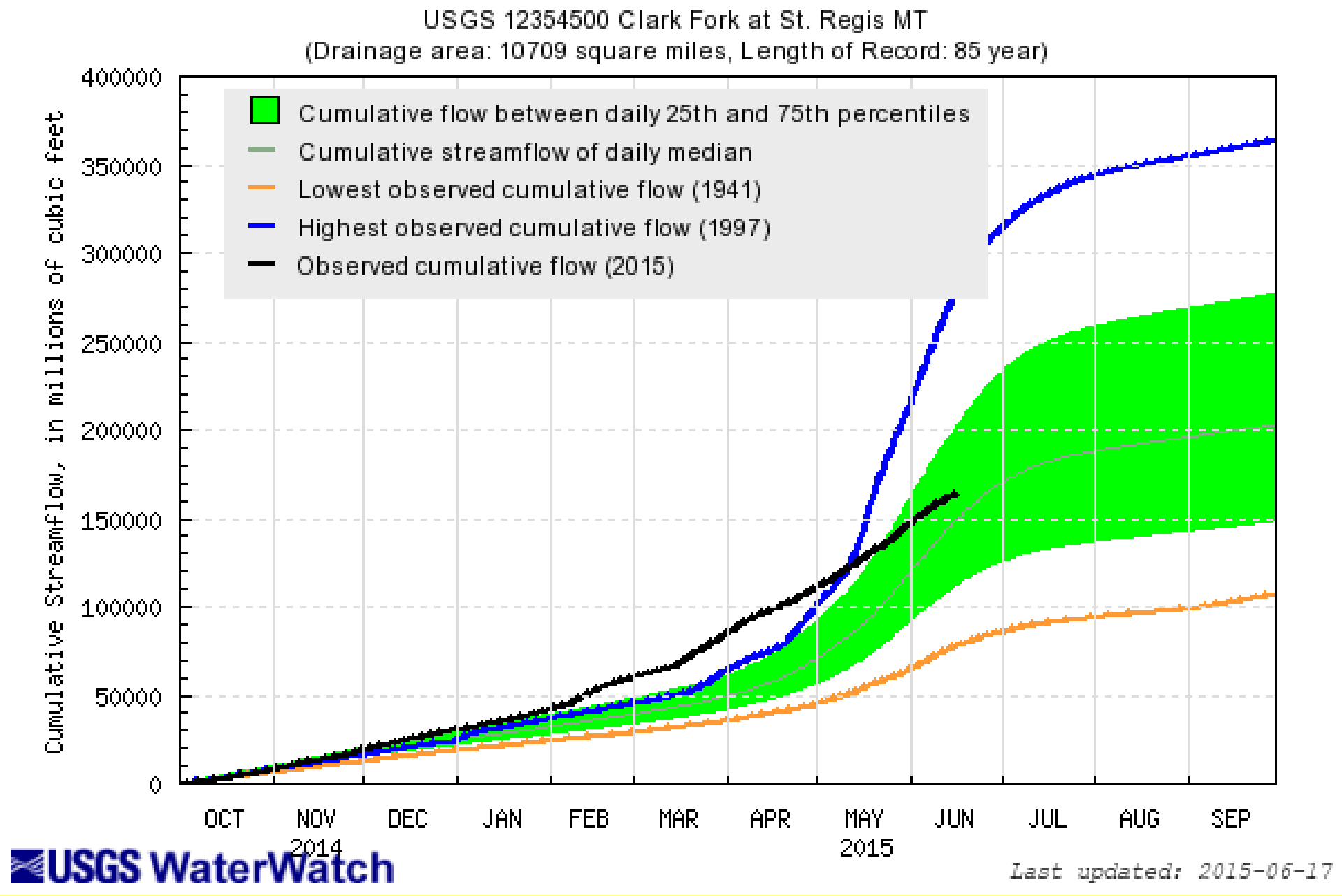

USGS 12344000 Bitterroot River near Darby MT
(Drainage Area: 1049 square miles, Length of Record: 77 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12344000 Bitterroot River near Darby MT
(Drainage area: 1049 square miles, Length of Record: 77 year)
Cumulative flow between daily 25th and 75th percentiles
Cumulative streamflow of daily median
Lowest observed cumulative flow (1987)
Highest observed cumulative flow (1976)
Observed cumulative flow (2015)
Cumulative Streamflow, in millions of cubic feet
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
OCT
NOV
2014
DEC
JAN
FEB
MAR
APR
MAY
2015
JUN
JUL
AUG
SEP
USGS WaterWatch
Last updated: 2015-06-17


USGS 12352500 Bitterroot River near Missoula MT
(Drainage Area: 2814 square miles, Length of Record: 116 years)
Daily average discharge, in cubic feet per second
40000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12354000 St. Regis River near St. Regis, MT
(Drainage Area: 303 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
9000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal


USGS 12354500 Clark Fork at St. Regis MT
(Drainage Area: 10709 square miles, Length of Record: 85 years)
Daily average discharge, in cubic feet per second
70000
10000
1000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



USGS WaterWatch

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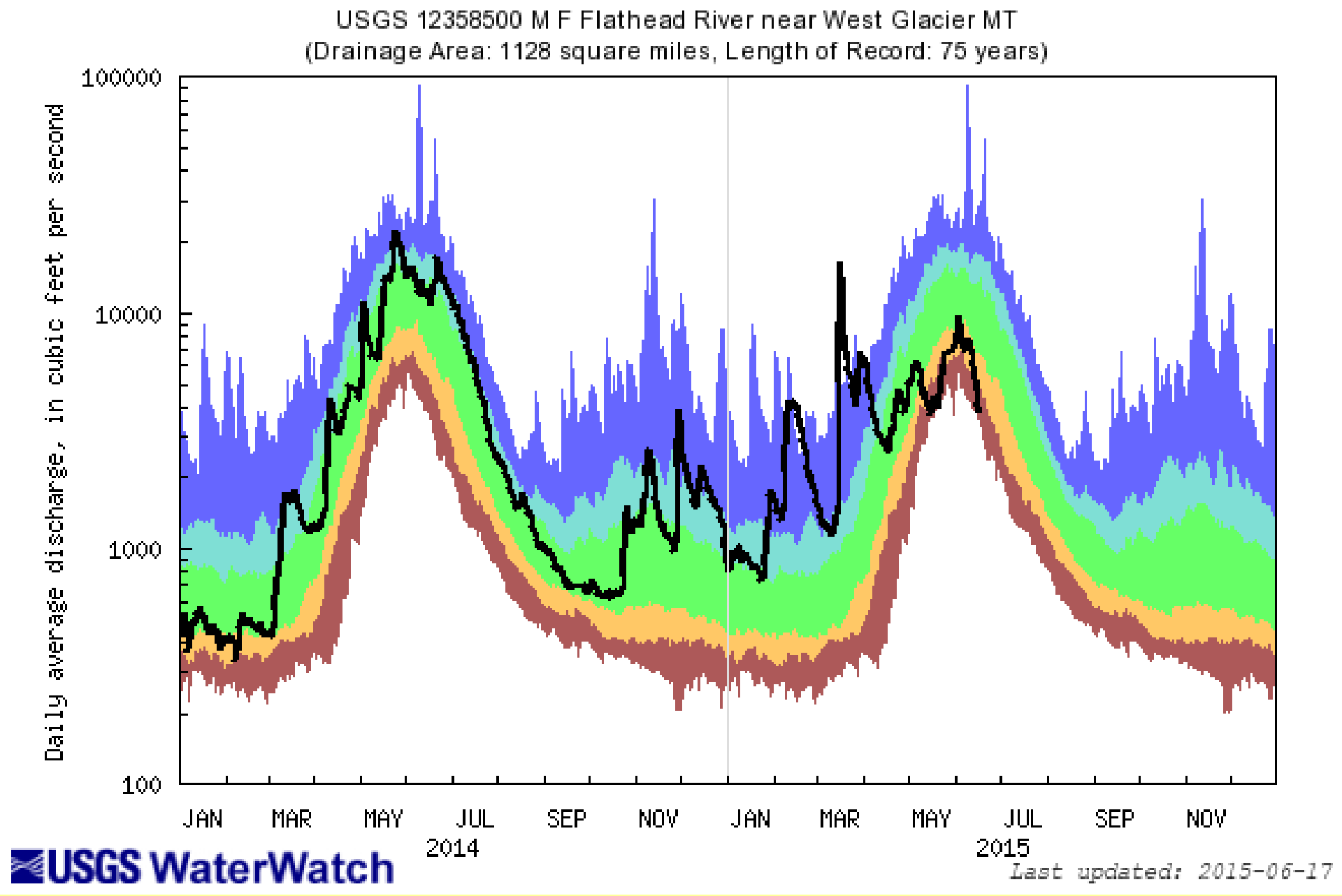
USGS 12358500 M F Flathead River near West Glacier MT
(Drainage Area: 1128 square miles, Length of Record: 75 years)
Daily average discharge, in cubic feet per second
100000
10000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
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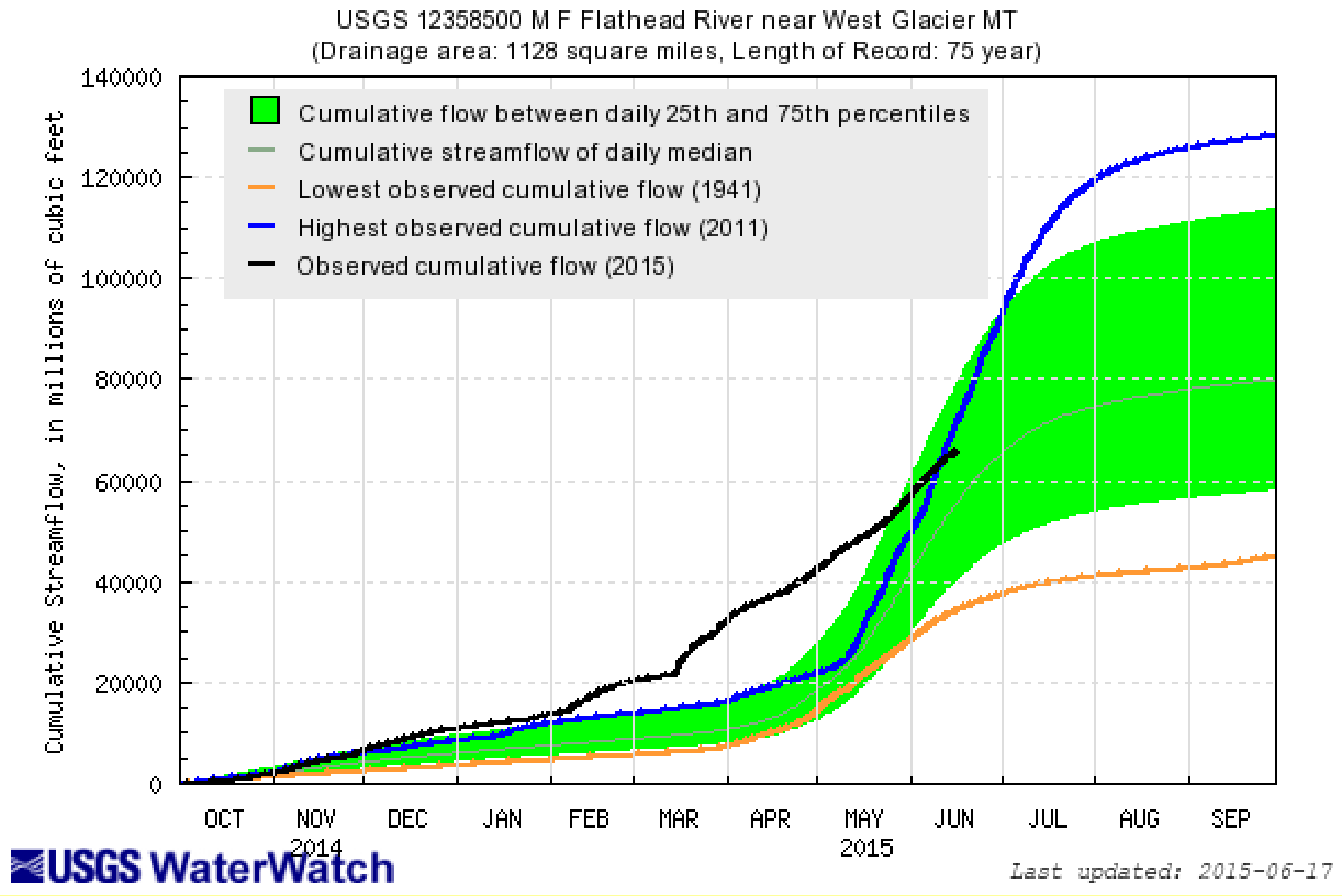
Explanation - Percentile classes
lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal



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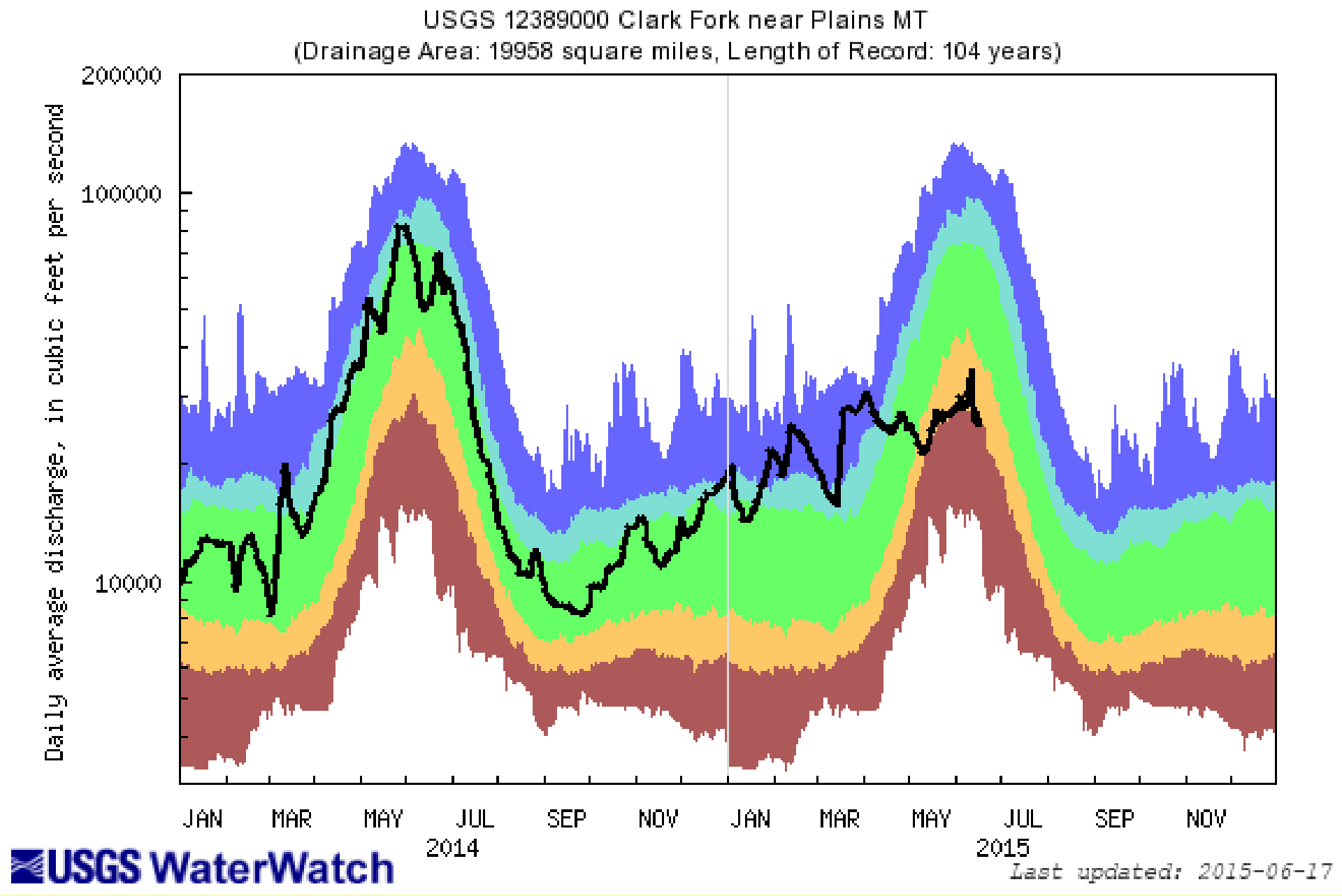
USGS 12389000 Clark Fork near Plains MT
(Drainage Area: 19958 square miles, Length of Record: 104 years)
Daily average discharge, in cubic feet per second
200000
100000
10000
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
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SEP
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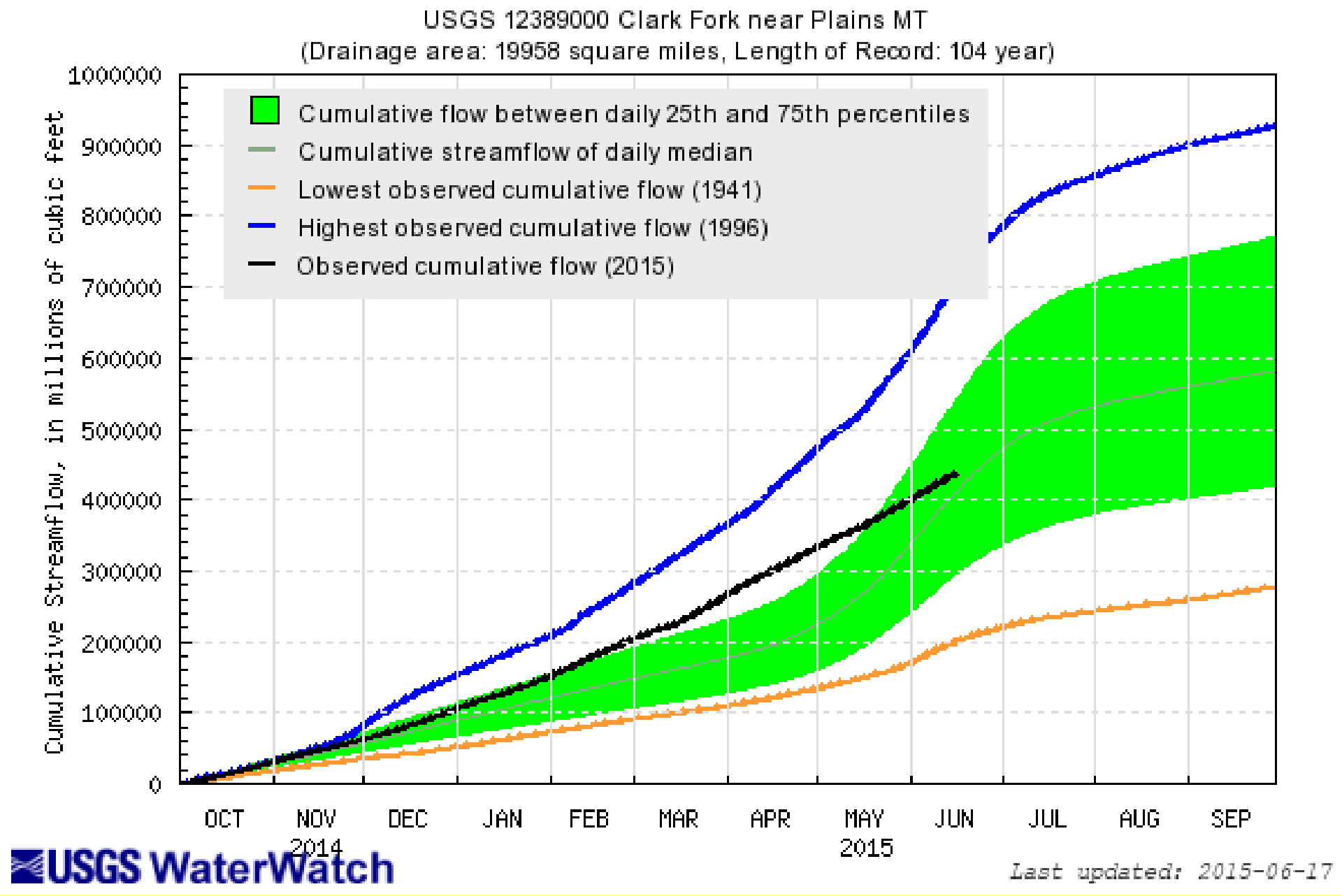
Much above normal



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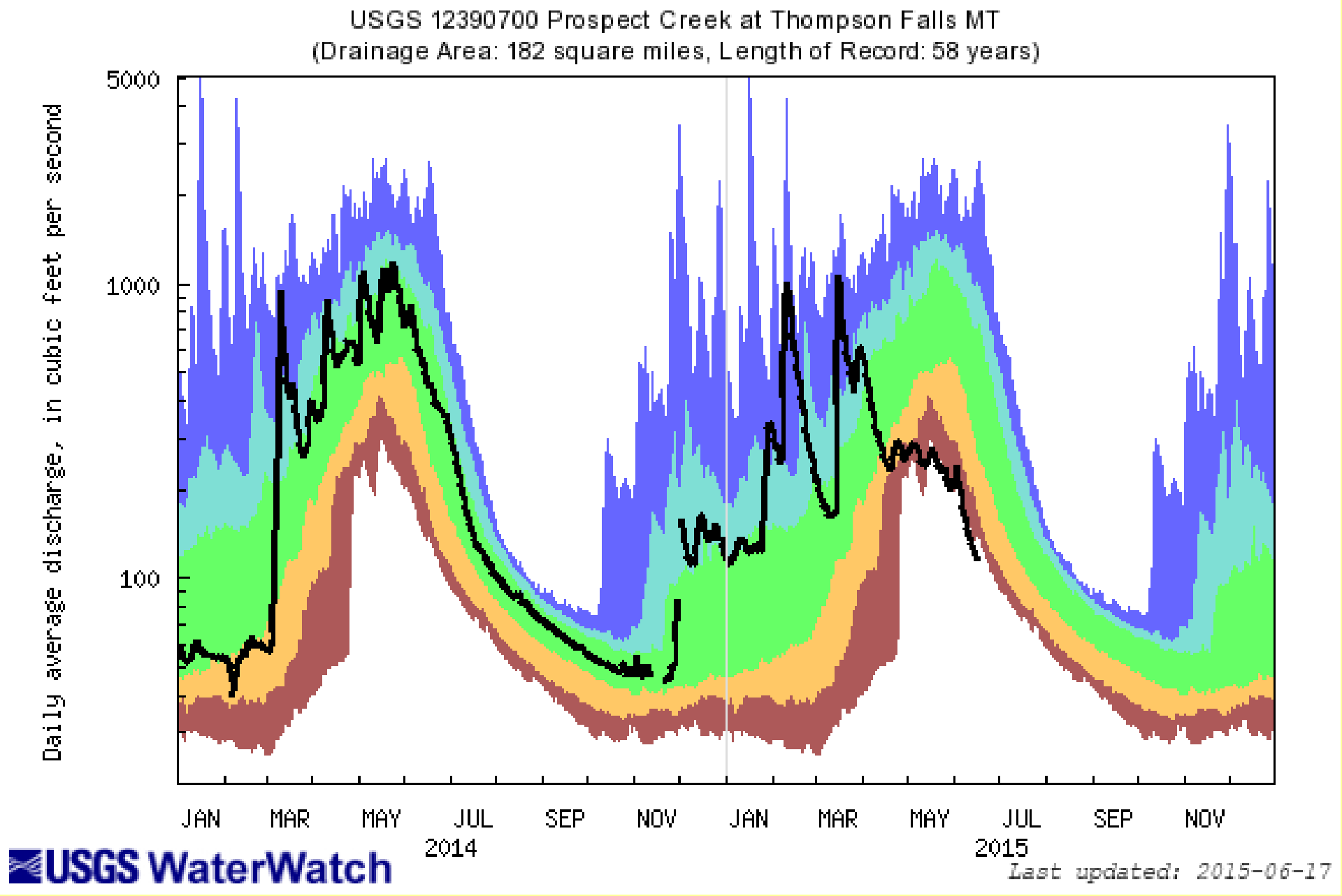
USGS 12390700 Prospect Creek at Thompson Falls MT
(Drainage Area: 182 square miles, Length of Record: 58 years)
Daily average discharge, in cubic feet per second
5000
1000
100
JAN
MAR
MAY
JUL
SEP
NOV
JAN
MAR
MAY
JUL
SEP
NOV
2014
2015
USGS WaterWatch
Last updated: 2015-06-17
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lowest-10th percentile
10-24
25-75
76-90
90th percentile -highest
Flow
Much below normal
Below normal
Normal
Above normal
Much above normal

USGS Home Page: http://usgs.gov

NwisWeb: http://water.usgs.gov/mt/nwis
Access to streamflow (realtime and historical), water quality, and ground water information.

Montana District Home Page: http://mt.usgs.gov
Montana Current Streamflow Conditions